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Public Meeting

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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DISCUSSION ON PROPOSED 10 CFR PART 61 RULEMAKING

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PUBLIC MEETING

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TUESDAY, JUNE 9, 2015

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The Public Meeting was convened at the Riverfront Shilo Inn, 50 Comstock Road, Richland, Washington, at 5:00 p.m., Chip Cameron, facilitator, presiding.

PRESENT:

CHIP CAMERON, Facilitator

STEPHEN DEMBEK, NRC/NMSS

DAVID ESH, NRC/NMSS

CHRISTOPHER MCKENNEY, NRC/NMSS

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T A B L E O F C O N T E N T S

Opening Remarks and NRC staff introductions:

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P R O C E E D I N G S

(6:00 p.m.)

TELEPHONE OPERATOR: Welcome, and thank you for standing by. At this time, all participants are in a listen-only mode until the question-and-answer session of today's conference.

At that time to ask a question, please press star one on your touch-tone phone and record your name at the prompt. This call is being recorded. If you have any objections, you may disconnect at this time.

I would now like to turn the call over to Mr. Chip Cameron. Sir, you may begin.

FACILITATOR CAMERON: Okay. Thanks, Susan. And good evening, everybody. My name is Chip Cameron and I want to welcome you to the public meeting tonight.

And our subject tonight is a proposed rulemaking on the disposal of low-level radioactive waste. And this rule was proposed by the United States Nuclear Regulatory Commission. And the NRC is sponsoring this meeting tonight.

And we're going to try to not use a lot of acronyms tonight, but one acronym we will use is NRC for Nuclear Regulatory Commission.

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1 And it's my pleasure to serve as your
2 facilitator for the meeting tonight. And in that role,
3 I'll try to help all of you to have a constructive
4 meeting.

5 I just want to go over some meeting process
6 issues with you so you know what to expect. I want to
7 tell you about the objectives for the meeting, the
8 format for the meeting, some simple ground rules to help
9 us have a constructive meeting and I want to introduce
10 the NRC speakers who will be talking to you tonight.

11 In terms of objectives, the first one is
12 to give you a clear explanation of what is in the
13 proposed rule and what the rulemaking process is all
14 about for this proposed rule. The second objective is
15 to listen carefully to your comments tonight.

16 We're transcribing the meeting tonight.
17 So, your comments are going to be formally on the
18 record.

19 Comments for this rulemaking, we have
20 Terry right here who is our stenographer. And that
21 transcript from this meeting will be publicly
22 available. It's your record and the NRC's record of
23 what transpires here tonight.

24 Now, the NRC is also soliciting written
25 comments on the proposed rule. And in a few moments,

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1 the NRC staff will tell you how you submit written
2 comments on the rulemaking. And of course you can talk
3 tonight, give comments, and also submit written
4 comments later on.

5 In terms of the format if you look at your
6 agenda for the meeting, you'll see that we have a number
7 of speakers. After each speaker, we're going to pause
8 and go out to you for questions and comments.

9 And I should note that when we get to Dave
10 Esh, who is going to present on the technical aspects
11 of the rulemaking, Dave has a number of topics that he
12 is going to go to. And we'll stop after each one of
13 those topics and go out to you for questions and
14 comments.

15 We also have a number of participants on
16 the phone and on the web. And when we go out for
17 comments, we're also going to go to them to see what
18 they have to say.

19 Ground rules. When we go for a discussion
20 if you have anything you want to say, just give me a
21 signal and I'll bring you this microphone. And if you
22 could just introduce yourself for the record, Terry
23 will know who is talking.

24 And I would just ask that only one person
25 speak at a time, most importantly, so that we can give

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1 our full attention to whomever has the floor at the
2 moment, but also so that Terry can get what I call a
3 "clean transcript." She'll know who's talking at that
4 particular moment.

5 I would ask you to try to be brief in your
6 comments. I'm not going to set a time limit for that,
7 but I just want to make sure that we get to everybody
8 who wants to talk.

9 And you can make as many comments, ask as
10 many questions as you want throughout the evening. I
11 just want to make sure that we're equitable about who
12 has a chance to speak tonight.

13 In terms of our speakers, we're going to
14 go first to Chris McKenney who is right here. And Chris
15 is going to give you an overview on the rule.

16 He is the senior manager of the NRC here
17 tonight. He's the chief of the Performance Assessment
18 Branch in the Division of Decommissioning, Uranium
19 Recovery and Waste Programs in the NRC Office of Nuclear
20 Material Safety and Safeguards, and he'll be giving you
21 the overview.

22 We're then going to go to Steve Dembek who
23 is right down here. And Steve is the project manager
24 in the Low-Level Waste Branch in the division that I
25 just mentioned. Steve will go over what the rulemaking

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1 process is, including how and when to submit comments.

2 And finally we're going to go to Dave Esh
3 who is a technical expert on performance assessment.
4 He's in Chris' branch and they're all in the Division
5 of Decommissioning and so on.

6 And with that, I'll turn it over to Chris.
7 I think we're ready to go.

8 MR. MCKENNEY: Welcome. Tonight we're
9 having a -- again, a discussion of the proposed
10 rulemaking of the NRC that's coming out with -- that
11 affects the disposal of low-level radioactive waste.

12 The objectives of today's meeting are to
13 discuss the proposed revisions to encourage the
14 submittal of comments to the proposed rule language and
15 answer questions and receive comments from the public.

16 This is not your only opportunity to make
17 comments. As we're going to go through, there's more
18 than a month left in the -- nearly two months left --
19 a month and a half left in the comment period and we'll
20 give the ways to provide written comments to there.

21 So, why are we doing the rulemaking? We
22 are going to -- we are attempting to require the
23 low-level radioactive waste disposal licensees or
24 license applicants to ensure that low-level waste
25 streams that are significantly different from the

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1 streams considered in the current regulations can be
2 disposed of safely.

3 What that means is back in 1981 we did an
4 analysis and derived a set of regulations for the
5 disposal of low-level waste.

6 Since that time there have been a number
7 of things that have changed in the universe of what is
8 being done in the low-level waste disposal area. And
9 because of some issues, we felt that it was a good time
10 to make some changes to the regulations.

11 Next slide. And one of those big changes
12 was that in the late '90s-early 2000 time period we were
13 dealing with the question on where was the large
14 quantity of depleted uranium going to be going? Where
15 was it going to be disposed of?

16 We had some case work and request by our
17 Commission of our agency to do some staff analyses on
18 what would be important to have to safely dispose of
19 it.

20 We then got some Commission directions and
21 over the years we have got redirection. This action
22 has been sort of in place since 2005 and finally we came
23 to the proposed rulemaking this year to be able to issue
24 it for public comment.

25 One of the major issues of course is

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1 compatibility, because every low-level waste site in
2 the United States is in an Agreement State.

3 An Agreement State is a state that has
4 taken on the authority to regulate the disposal of
5 low-level radioactive waste such as the State of
6 Washington.

7 And there are some issues like if we make
8 the regulations as the Federal regulator, then some
9 regulations they need to have exactly the same wording
10 as what we did for some regulations, or they could have
11 more stringent, or in some cases they have a choice of
12 whether they need part of the regulations or not.

13 Most of the regulations in this proposed
14 rulemaking are of the type that they have to have the
15 same as what the NRC's final rule is going to be. And
16 that is, of course, a major question that we are asking
17 people to comment on.

18 We also have some outstanding work
19 afterwards, because the Commission did tell us during
20 this whole thing that they wanted us to do this
21 rulemaking, and then there's a possibility of a
22 rulemaking following up on this to actually classify
23 depleted uranium to what type of waste class it is
24 whether it's Class A, B or C, or greater than Class C
25 depending on the concentration amount.

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1 So, in the proposed -- in the current rule
2 there is a -- one of the first statements in it is this
3 paragraph about applicability of the requirements in
4 Part 61.

5 This was placed in the regulation back in
6 1981, because several sites already were operating at
7 the time including the US Ecology site Hanford.

8 At that -- this gave the Agreement States
9 the ability to decide what parts of the regulation were
10 applicable to that site since it was already operating.

11 In the '80s, each of the Agreement States
12 has taken the choices and have made virtually all those
13 requirements across actually applicable onto those
14 sites.

15 And this is a major difference to this
16 rule, because the -- this proposed rule would be in
17 affect to all sites whether they're existing or future.
18 We feel that is for consistency and we're talking about
19 safety functions, not some of the other requirements
20 that were in play during the original Part 61.

21 So, as I discussed earlier, depleted
22 uranium started out as one of the main drivers to get
23 resources to do this proposed rulemaking especially
24 from the enrichment facilities, because there is at
25 least 750,000 metric tons of uranium out there that

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1 needs to be disposed of at some point. And more is
2 being produced.

3 Also, one of the big changes from 1981 was
4 at a number of the commercial sites, the amount of
5 low-level waste coming from DOE operations has
6 increased.

7 There have also been changes in waste forms
8 and volumes of other radionuclides. There is at a few
9 sites the issue of whether you could have larger volumes
10 of blended low-level waste.

11 And also, new technologies may generate
12 unexpected low-level waste streams such as the
13 production of medical isotopes.

14 So, as part of this rulemaking we have went
15 through to make sure that -- try to get out into the
16 communities to have discussions before the comments are
17 due. And we have had meetings since March with this
18 being the second to the last meeting, as shown on the
19 slide.

20 And after this rulemaking is final --
21 again, I said that there are some outstanding issues
22 of -- that the Commission has asked us to figure out
23 the waste classification.

24 We will be going out after this rule is
25 final and at some period after that to interact with

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1 the public again to talk about that part of the rule.

2 But if you do have comments about that now,
3 we're willing to take those comments during this
4 comment period which is not only tonight, but again
5 through the written comment period through the end of
6 July -- or July 24th. Sorry, not end of July.

7 And there are a number of backup slides
8 which have a lot of wording on exactly our directions
9 from our Commission and the -- what they told us to do,
10 if you're interested.

11 And with that, I'll be able to pass over
12 for the details to Steve after any questions.

13 FACILITATOR CAMERON: Okay. So, that's
14 it. All right. Any questions or comments on the
15 overview? Is it clear why the NRC has decided to
16 undertake this rulemaking at this point?

17 And we will get into specific topics later
18 on, but anybody have a question now?

19 (No questions.)

20 FACILITATOR CAMERON: Okay. Susan, does
21 anybody on the phone have a question?

22 TELEPHONE OPERATOR: I'll be happy to
23 check for you. Again, if you'd like to ask a question,
24 please press star one and record your name at the
25 prompt.

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1 One moment for any incoming questions.

2 (Pause.)

3 FACILITATOR CAMERON: So, no one there,
4 Susan?

5 (No response.)

6 FACILITATOR CAMERON: This is a little bit
7 like watching the ice melt off the truck in Pittsburgh,
8 but, Susan?

9 TELEPHONE OPERATOR: Excuse me. We do
10 have a question from Diane. Ma'am, your line is open.

11 MS. D'ARRIGO: Hello.

12 TELEPHONE OPERATOR: Go ahead.

13 MS. D'ARRIGO: Oh, okay. Two questions,
14 really, and maybe you can answer them throughout the
15 evening, but one has to do with a little more specifics
16 about the compatibility rating and whether if this is
17 made mostly a verbatim compatible whether that will
18 apply retroactively to closed radioactive waste sites.

19 And, also, whether the rule itself would
20 be able to be applied to closed or existing sites --
21 I guess closed sites, because obviously it's going to
22 be for existing sites.

23 FACILITATOR CAMERON: Okay. Thanks,
24 Diane. So, Diane D'Arrigo on the phone.

25 Do you want to address the compatibility

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1 designation and the closure issues now, or, David, are
2 you going to go into more?

3 Okay, Chris.

4 MR. MCKENNEY: So, ma'am, on the
5 compatibility if there is a strict compatibility, then
6 the regulations need to be exactly as listed, put into
7 the regulations.

8 So, if it's that the time of compliance is
9 a thousand years, then each of the states would have
10 a thousand years in their regulations even though all
11 of the states have used longer time periods for their
12 current licensing basis for their sites.

13 FACILITATOR CAMERON: And so, that's
14 called Compatibility Level 2?

15 MR. MCKENNEY: B.

16 FACILITATOR CAMERON: B, okay.

17 MS. D'ARRIGO: But is it for states that
18 already have something that's stricter like
19 Pennsylvania had an institutional control period
20 that's longer and New York has recommended doses -- or
21 guidance doses that are more stringent.

22 What you're saying here is that the new
23 lack -- what really is laxer radiation standards for
24 the inadvertent intruder would then -- then states
25 would have to apply these weaker standards meaning that

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1 the final closure and cleanup of these sites could
2 actually be not as stringent as might currently be
3 required.

4 FACILITATOR CAMERON: Okay. This is an
5 important question --

6 MR. MCKENNEY: Right.

7 FACILITATOR CAMERON: -- in terms of how
8 this rule would operate vis-a-vis Agreement States in
9 the future.

10 MR. MCKENNEY: Right.

11 FACILITATOR CAMERON: And there is a
12 certain amount of time that they are given to come into
13 compatible, but --

14 MR. MCKENNEY: Right.

15 FACILITATOR CAMERON: -- without getting
16 into any specifics about specific states, can you talk
17 to Diane's hypothetical that if a state has a more
18 stringent requirement in some area, that they would
19 need to conform to the NRC rule even if it was less
20 stringent, whatever that means?

21 Is that correct, Chris?

22 MR. MCKENNEY: If the requirements are a
23 lot like Compatibility B and not another category like
24 -- well, C is the next one, and that one allows a state
25 to be more stringent in that spot of the regulations,

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1 yes, their regulations would have to come into exact
2 criteria whether that's the thousand years or it's the
3 500 millirem for intruder assessment, but remember
4 that's 500 millirem plus ALARA.

5 So, the regulation itself --

6 MS. D'ARRIGO: Well, that's only two of
7 the criteria; the length and the dose. You've also got
8 the whole permissibility to do performance assessment,
9 which wasn't part of it before.

10 It was A, B, C and greater than C was some
11 alternative methods for compliance, but now there's a
12 lot more flexibility for the operator to show
13 compatibility with, you know, something like depleted
14 uranium being able to go into a site that only had a
15 hundred-year institutional control.

16 And so, it seems of pretty great concern
17 that NRC would be preempting states from maintaining
18 their current levels of protection.

19 MR. MCKENNEY: Yes. I mean, and that's
20 why we're very interested in comments on the
21 compatibility issue. And thank you, Diane.

22 FACILITATOR CAMERON: Okay, but --

23 MR. MCKENNEY: That was on the first
24 issue. The second issue she raised was on --

25 FACILITATOR CAMERON: Oh, on closure of

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1 sites.

2 MR. MCKENNEY: Closed sites. Previously
3 closed sites --

4 MS. D'ARRIGO: Uh-huh.

5 MR. MCKENNEY: -- like New York, Illinois
6 ---

7 MS. D'ARRIGO: Kentucky, Nevada.

8 MR. MCKENNEY: -- Kentucky, those three
9 all were never Part 61 facilities. So, it would be --
10 right now there's no issues.

11 From a previous meeting, we have taken the
12 comment and we're going to need to look into it more
13 exactly about if a site were to close between now and
14 implementation, what would be that affect?

15 MS. D'ARRIGO: So, you're saying that the
16 rule -- that the new 10 CFR 61 doesn't really apply to
17 Nevada, New York, Kentucky or -- and there's one other
18 one that closed -- Illinois, because those were never
19 10 CFR 61 anyway.

20 So, whatever you do with 10 CFR 61 doesn't
21 apply to those four sites?

22 MR. MCKENNEY: Except for Nevada. Nevada
23 was a Part 61 site.

24 MS. D'ARRIGO: Oh.

25 MR. MCKENNEY: It closed in '92 after it

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1 became a Part 61 site. So, we are taking up the comment
2 about closure to be much clearer about that to try to
3 say exactly, because there's both the state of like the
4 state of Nevada, and then we had a hypothetical about
5 what happens if a current operating site were to close
6 before these regulations came into effect.

7 From a previous meeting, we're trying to
8 respond to those in the public comment period.

9 FACILITATOR CAMERON: Okay. Thank you.
10 Thank you, Diane, and we will be back to you, but the
11 important issue there is that if you disagree with the
12 compatibility, proposed compatibility in the rule,
13 compatibility category, please note that to the NRC,
14 as well as the rationale why you think it should be a
15 different compatibility category.

16 Susan, anybody else on the phone right now
17 for questions or comment?

18 TELEPHONE OPERATOR: No, sir, there are no
19 further questions at this time.

20 FACILITATOR CAMERON: Okay. Thank you.
21 Thank you, Susan.

22 We're going to go to Steve Dembek now who's
23 going to talk to you about the rulemaking process.

24 Steve, are you ready?

25 MR. DEMBEK: I'm ready, yes.

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1 FACILITATOR CAMERON: Okay.

2 MR. DEMBEK: Thank you, Chip.

3 As Chip mentioned, my name is Steve Dembek.

4 I am a project manager in the Division of
5 Decommissioning, Uranium Recovery and Waste Programs.

6 I work alongside the others here and I'm
7 going to talk to you about why we do rulemaking, the
8 draft guidance document, a little bit about that, the
9 timeline that we're working with to get the proposed
10 rulemaking completed, where you can get copies of the
11 proposed rule and the comment submittal process.

12 Let's see. So, the question, why do we do
13 rulemaking? Rulemaking is one way in which the
14 Commission's policy is implemented. Long-term it is
15 a Commission policy to regulate through the development
16 of rules and not to regulate through orders or through
17 license conditions.

18 The rules are applicable to the entire
19 license community and not just to the ones that received
20 an order or a license condition.

21 Also, rulemaking is a public process.
22 This is obviously a public meeting here. So, we give
23 the public opportunity to comment on the proposed rule
24 and to consider that and submit written comments. And
25 we're doing an extra step here having these meetings.

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1 So, we're giving the public an opportunity to comment
2 during these meetings.

3 And as Chip noted, we're going to look at
4 the transcript of all these meetings to consider the
5 comments that we received during these meetings, too,
6 but we also encourage you to submit written comments
7 to us.

8 But since it is a public comment, remember
9 any comment you do submit to us will be made publicly
10 available.

11 Now, in developing a proposed rule, we
12 consider recent research, lessons learned from
13 implementation of our existing regulations, any issues
14 that we identify through inspections at the licensed
15 facilities, any requests for rulemaking we get from the
16 public. And our advisory bodies at the NRC also can
17 suggest -- can influence the rulemaking. And all of
18 these are considered as we develop a proposed rule.

19 And this proposed rule was published in the
20 Federal Register on March 26, 2015, with a 120-day
21 comment period. And that 120-day comment period
22 expires on July 24th, 2015.

23 And the last bullet on this slide is a slide
24 that was in -- is part of Chris' slide. So, I'm not
25 going to go over that.

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1 Now, I'm going to move on to a little bit
2 about the draft guidance document. The draft guidance
3 document helps our licensees and the regulators to
4 implement the proposed rule.

5 The Federal Register Notice requested
6 comments on the draft guidance document was also issued
7 on March 26, 2015. And it also has a 120-day comment
8 period.

9 The comments on the guidance document are
10 also very important to us. So, we encourage you to look
11 at the guidance document. It's quite a large document.

12 As you can see there, it's got flowcharts,
13 guidelines for what licensees or applicants should
14 include, suggested references, case studies, et
15 cetera. There is a wealth of information in the
16 guidance document and we expect to finalize the
17 guidance document at the same time we expect to finalize
18 the proposed rule.

19 So, what is the timeline? When should we
20 be doing the finalization of these? This slide here,
21 my Slide 5, shows that we are on the upper left of this
22 timeline, the public meeting and comment period. That
23 ends on July 24th.

24 And then we go into developing responses
25 to the comments and starting to develop the final rule.

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1 And in parallel to that we're going to
2 develop the response to the comments and develop the
3 final NUREG-2175, the final guidance document.

4 And then after we make our recommendation
5 for the final rule, we'll propose it to the Commission
6 and publish the final rule after it's been approved by
7 the Commission.

8 And then one year later the rule will
9 become effective and then Agreement States have three
10 years to implement their own rules to promulgate the
11 rule change issued by the NRC.

12 So, where can you find out more
13 information? We have a website, www.nrc.gov. If you
14 click on the radioactive waste tab and then from there
15 click on low-level waste disposal and then click on
16 site-specific analysis, you'll see a wealth of
17 information, redline strikeout versions of the
18 proposed changes, the complete version of the guidance
19 document in PDF, the proposed rule itself and the
20 Federal Register Notice for that.

21 And the Federal Register Notice for the
22 guidance document, too, is there. And those documents
23 are also available at www.regulations.gov.

24 Please take note that there are actually
25 two different docket numbers associated with the rule,

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1 with the proposed rule and with the guidance document.

2 For the proposed rule, the docket number
3 is NRC-2011-0012. And for the guidance document it's
4 NRC-2015-0003.

5 We also have the ADAMS accession number
6 there -- accession numbers for the documents. And
7 you're also welcome to come to the NRC headquarters in
8 Rockville, Maryland and view the documents there.

9 I'm going to take a look at the website just
10 so I can show you some of the information that's
11 available.

12 And as I said, you start out at the
13 Radioactive Waste tab, you click on Low-Level Waste
14 Disposal and that brings you to this site here.

15 Then on the -- go down to the right,
16 Site-Specific Analysis Rulemaking, Unique Waste
17 Streams, you click on that and you'll see a wealth of
18 information including the history of this issue, of
19 this rulemaking issue, what the existing -- you can have
20 a link to the existing regulations, all the whys we're
21 doing this, the history of the public meetings we had
22 leading up to where we are. That's shown right here,
23 history of some public meetings we had and are having.

24 And then you can click on the proposed rule
25 changes and redline strikeout, as I mentioned. You can

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1 click on the Federal Register Notices.

2 There's a poster I handed out to you that's
3 on the table over there. You can get a copy of that
4 poster. That's right here.

5 I mentioned this is a public process. So,
6 as we go through these meetings, we post briefing
7 materials. And then when the meeting is over, a few
8 days later we get the transcript from the transcription
9 service and we post that information, too, in PDF.

10 So, I encourage you to look at these
11 slides, I mean, look at this website and pull up the
12 slides, pull up all the information to fully educate
13 yourself on this rule.

14 Regarding how do you submit comments, we
15 try to be as flexible as possible on this. And as you
16 can see on this slide, there are four different ways
17 you can submit comments.

18 You can go to www.regulations.gov.
19 That's the overall Federal government website. You
20 have to remember to use the correct docket number.
21 Once again, NRC-2011-0012.

22 You can mail comments to the secretary of
23 the NRC. You can email comments to the special email
24 address we have set up there. You can hand-deliver
25 comments to us in Rockville, Maryland, or you can fax

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1 comments to the secretary. Any of those methods are
2 acceptable.

3 And as was mentioned a couple times
4 already, we're going to go through the transcript of
5 tonight's meeting to look for comments.

6 Please note that the comment submittal
7 process for the guidance document is different. The
8 guidance document, first of all, has a different docket
9 number, NRC-2015-0003, but you can also -- you can go
10 to the regulations.gov website, but you have to use the
11 correct docket number.

12 And you can also mail comments to us. It
13 is a different mailing address. This goes to a branch
14 chief in our Office of Administration instead of the
15 Office of the Secretary as the rulemaking comments go
16 to.

17 And at one of the earlier meetings somebody
18 asked, well, what if -- these people are not technical
19 experts. What do they do with the comments they get?

20 They give them to us. We're going to get
21 the comments and we'll have to evaluate them. So, they
22 will get to the right technical people. Even if you
23 mistakenly give a rulemaking comment on the guidance
24 document comment area, it will go to the right place,
25 but this is the process you should be using.

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1 That completes my presentation. If you
2 have any questions, please look at our website or you
3 can contact me with the contact information there.

4 I also gave you another name, email address
5 and phone number for Gary Comfort. He works in our
6 Rulemaking Branch. I'm in the Project Management
7 Branch. David Esh and Chris McKenney are in our
8 Technical Branch. And we also have another branch that
9 works on this issue in the Rulemaking Branch.

10 So, Gary Comfort works in the Rulemaking
11 Branch and you could ask any one of us if you have any
12 particular questions.

13 FACILITATOR CAMERON: Great. Thank you,
14 Steve.

15 Questions in the room about the process?
16 Is the process clear? Let's go to Gerry. And, Gerry,
17 if you could just introduce yourself to us?

18 MR. POLLET: Gerry Pollet, executive
19 director of Heart of America Northwest, a
20 northwest-based public interest group with a concern
21 about disposal at US Ecology, as well as the Hanford
22 nuclear cleanup site.

23 My question is, you had an EIS for the prior
24 rule and I haven't heard anything about a supplemental
25 EIS or NEPA review for us to be able to effectively

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1 review and comment on such issues as the impact of the
2 change in rule for performance time.

3 So, what is happening with supplemental
4 review or a new EIS?

5 FACILITATOR CAMERON: Okay. Great.
6 What is the status or what has the NRC said in the
7 proposed rule about NEPA, the environmental impact
8 statement, Chris?

9 MR. MCKENNEY: We reviewed the issue
10 several times, actually, throughout this rulemaking.
11 And we had -- the legal rules for the National
12 Environmental Policy Act have -- were not -- would not
13 require us to do an EIS, a supplemental EIS for this
14 action, because we are not directing actual changes to
15 licenses or on specific material. These are more on
16 processes, but that of course is available for comment
17 right there.

18 But that is why you haven't found one is
19 because there was a decision made early in the process
20 that that wasn't required.

21 FACILITATOR CAMERON: Okay. And as Steve
22 said, this will be considered as a comment that -- I
23 don't want to put words in your mouth, but there should
24 be an EIS.

25 Gerry, go ahead.

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1 MR. POLLET: First off, I think legally
2 that's wrong, because NEPA applies to programmatic
3 actions. This is clearly a programmatic action.

4 You had a prior EIS and it is woefully out
5 of date. And when we look today at things, such issues
6 that this will cover, it is inadequate to say, well,
7 we're going to review site-specific analyses because
8 you're making a programmatic-level decision, for
9 instance, saying -- and I'll just pick on one -- a
10 500-millirem dose for the first 1,000 years under --
11 what is it? The 61.42, right? And 25 millirem per
12 year for the non-intruder.

13 So, even if you had covered that 15 years
14 ago, today you would have to do a supplemental EIS based
15 on findings, for instance, of National Research
16 Council on the new understanding of the impact of that
17 same dose on women and children, which is much higher.

18 So, a 500-millirem dose which you would
19 allow under the proposed rule for a thousand years works
20 out under BEIR VII for the average adult to be about
21 30 additional fatal cancers for every 1,000 people
22 exposed. 25 millirem is seriously enough, you know,
23 that's 1.5 per thousand.

24 So, we now have a new understanding of the
25 very serious health effects from the same dose that was

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1 proved many years ago. And at minimum, you have the
2 legal obligation to explain that to the public and for
3 the Commission itself to show that you considered those
4 impacts in a new or supplemental EIS.

5 FACILITATOR CAMERON: Okay. Thanks,
6 Gerry. And as Gerry indicated, he disagrees with the
7 legal conclusion. But even though the NRC is not --
8 may not be required legally to do a supplemental EIS,
9 as a policy matter they could decide to do an
10 Environmental Impact Statement; is that correct?

11 MR. MCKENNEY: That is always correct,
12 yes.

13 FACILITATOR CAMERON: Okay. Thank you.
14 Thank you, Gerry.

15 Anybody else in the room on rulemaking
16 process?

17 (No questions.)

18 FACILITATOR CAMERON: Okay. Let's see
19 what we have on the phone.

20 Susan, can you see if anybody on the phone
21 has a question or comment on the rulemaking process?

22 TELEPHONE OPERATOR: Sure. Again, if
23 you'd like to ask a question, please press star one and
24 record your name at the prompt. One moment, please.

25 We do have a question from Diane D'Arrigo

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1 again. Here we go. Your line is open, ma'am.

2 MS. D'ARRIGO: Hi. I talked to Steve a
3 little bit about this before, but my question has to
4 do with the portion of the rulemaking for which the
5 comment deadline already expired.

6 It's a section of the rule that, as I
7 understand it, has to do with how calculations will be
8 done or how they will be applied.

9 And so, if you could speak to that and is
10 there a possibility of more time to address that by the
11 public once we even know what it is?

12 FACILITATOR CAMERON: Steve, do you know
13 what Diane is referring to?

14 MR. DEMBEK: Yes.

15 FACILITATOR CAMERON: Okay. Go ahead.

16 MR. DEMBEK: Diane, the public comment
17 period for the burden imposed by the information
18 collection requirements has expired. But as the
19 Federal Register Notice stated, we will certainly
20 consider any -- we'll try to consider any comments
21 received after that date.

22 And since we do have a 120-day comment
23 period for this rule, we should have time to consider
24 any comments we receive on that.

25 So, if you feel that there's too much

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1 burden imposed on the industry from this information
2 collection requirement, you're certainly able to
3 submit comments on that. And that goes to different
4 --

5 MS. D'ARRIGO: Well, as I was talking with
6 you about this before, you know, that I don't work for
7 the industry, that I represent more the dose receptors,
8 the public who gets exposed to this stuff and we would
9 like to have a better understanding of what is actually
10 being calculated.

11 So, the example of West Valley is in the
12 appendix here. And a big fight that's going on now at
13 West Valley is whether the performance assessment
14 that's going on is really, you know, how are we going
15 to get access to the information that leads to the
16 decisions?

17 So, when a profit-making company which
18 stands to make a profit from accepting other waste
19 streams that are perhaps higher or longer lasting than
20 the facility was originally designed to take, the NRC
21 is asking the question of how much of a burden is this
22 to the industry to have to show this information.

23 And I'm asking -- I'm trying to argue that
24 certainly you have to be concerned about their burdens,
25 but what about the burden on the public to not even able

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1 to know what's going on and being able to give input.

2 So, I'm turning the question around and
3 asking whether there's going to be some requirement to
4 reveal the information that goes into these assessments
5 to the public in some way --

6 MR. DEMBEK: I think --

7 MS. D'ARRIGO: -- but the burden is on the
8 public to have to try to figure all that out on their
9 own. You don't seem to care about the burden on us at
10 all.

11 MR. DEMBEK: Well, Diane, I think your --

12 MS. D'ARRIGO: Yet, you're supposed to be
13 protecting us.

14 MR. DEMBEK: Yeah, I think your comment
15 really falls under the comment period that ends on July
16 24th. If you feel that the public is not being given
17 enough information through this process, that would
18 come under the comment period that ends July 24th.

19 So, you should feel free to submit that
20 comment. And we're getting it, of course, through this
21 meeting.

22 FACILITATOR CAMERON: I think that that's
23 correct, but would you mind if I just explained what
24 this information collection is so that Diane and
25 everybody else knows what it is?

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1 And why you're, I think, correct is that
2 under the Paperwork Reduction Act, which is a statute,
3 Federal statute, agencies when they propose an action
4 that puts information collection requirements like
5 record-keeping or submitting reports on anybody, they
6 have to submit a package to the Office of Management
7 and Budget that calculates how much of a burden in hours
8 those information collection requirements are imposed
9 on anyone. And OMB has to get comments on that and
10 review it.

11 So, that's the purpose of the information
12 collection that was -- that has expired at this point,
13 but even on those information collections if someone
14 has something to say about those information
15 collections or what Diane talked about, about burdens
16 on the public, they can still submit that to the NRC.

17 And, perhaps, just to mention what may be
18 more relevant to Diane's point is that the NRC has
19 prepared what's called a regulatory analysis on this
20 rulemaking. That's a cost-benefit analysis on the
21 complete rulemaking.

22 And Steve, when he went through the
23 website, one of the things on the website is the
24 regulatory analysis, I think, and that that would be
25 fair game for anybody who would want to comment on that,

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1 too. But hopefully that clarifies it a little bit and
2 --

3 MS. D'ARRIGO: Well, why I'm raising it,
4 really, is that what's being proposed here is a whole
5 new ability for the waste operators to take whole new
6 categories of waste and do performance assessments
7 which presumably would involve some amount of
8 record-keeping to show what they've done.

9 And so, just the fact that the whole rule
10 is involving more so that they can make a profit on
11 taking more categories of waste, what I'm saying is that
12 the -- well, I've said what I have to say.

13 FACILITATOR CAMERON: Okay. And, Steve,
14 just to repeat what you said, you heard Diane's
15 concerns. And if Diane or anybody else wants to submit
16 a comment on that during this rulemaking period, that
17 will be considered by the NRC, correct?

18 MR. DEMBEK: Correct.

19 FACILITATOR CAMERON: Okay. Susan,
20 anybody else on the line now on the rulemaking process?

21 TELEPHONE OPERATOR: No, sir, there are no
22 further questions.

23 FACILITATOR CAMERON: Okay. Great.
24 Well, let's -- oh, I'm sorry, Gerry.

25 MR. POLLET: I want to ask two process

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1 questions.

2 FACILITATOR CAMERON: Go ahead.

3 MR. POLLET: I have a separate process
4 question which is, has the NRC and staff formally
5 consulted with Native American nations that have treaty
6 rights that are impacted by existing 10 CFR Part 61
7 sites?

8 So, for example, right here you have a set
9 of three nations, two with explicit seated land rights,
10 surrounding the US Ecology site that would be directly
11 impacted.

12 And pursuant to Executive Orders and other
13 government-to-government relationships, have you
14 formally consulted with them, or do you plan to as part
15 of the process?

16 FACILITATOR CAMERON: Chris, or I don't
17 know who wants to handle that, but -- Chris.

18 MR. MCKENNEY: We have not formally went
19 through an additional process with the tribes. Again,
20 we are not the direct regulators for this area because
21 of the Agreement State status.

22 We have had discussions with these three
23 tribes previously about the US Ecology site several
24 years ago, but -- and which in that EIS were more
25 extensive criteria in place than are being done in this

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1 rulemaking.

2 They did dose analysis to 10,000 years.
3 They did intruder assessment at the time with only a
4 hundred millirem, I believe, is one of those criteria,
5 but we have not formally done it right now. We will
6 take that comment back to my -- our tribes -- our --
7 the group that -- our group that is in contact with all
8 of the Native American tribes.

9 MR. POLLET: Okay. I work very closely
10 with a couple of the tribes and, you know, there has
11 been no Native American, Yakama Nation-specific
12 exposure scenario run with the Yakama Nation input for
13 this site.

14 And they have very clearly taken a very
15 strong position and concern about the impacts over
16 10,000 years as evidenced by the Energy Department site
17 EIS, tank closure and waste management EIS.

18 So, a concern -- and they have voiced their
19 formal concern over proposals to allow releases based
20 on uranium and plutonium modeling that would impact by
21 State Department of Health modeling cause a 1.5 percent
22 fatal -- no, 1.5 in a thousand and up to two and a half
23 to five percent cancer risk for Native Americans
24 exercising exposure treaty cultural rights.

25 So, I'm just kind of surprised and

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1 disturbed that you wouldn't have consulted formally
2 with the tribe since you're talking about changing
3 rules very specifically.

4 It is not just a national project where you
5 have -- we don't know where sites may open. You have
6 existing sites with treaty rights that are impacted
7 right now. You know who they are and you cannot
8 delegate to the State your Federal trust obligation and
9 your obligation to conduct a government-to-government
10 relationship.

11 That is not the State's responsibility.
12 It cannot be delegated from you. That can't be part
13 of your delegation. You still have that
14 responsibility no matter what.

15 FACILITATOR CAMERON: Okay. Very good,
16 Gerry. And I think the NRC has caught the comment on
17 there and some of the implications.

18 Okay. Are we ready to go to David? And
19 David is going to go through a number of topics, but
20 his first comments are going to be an overview. And
21 I think we'll ask him to go right into the first specific
22 topic after that and then we'll open it up for
23 questions.

24 MR. ESH: Right.

25 FACILITATOR CAMERON: Okay.

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1 MR. ESH: Well, first I want to thank all
2 of you for coming. Appreciate that you attend this
3 sort of meeting and are going to give us some feedback.

4 We take all feedback, positive, negative.
5 We sometimes, I think, appreciate the negative more,
6 because we want a good product when it's all said and
7 done. So, and the negative feedback helps us do that.
8 If everybody just says, hey, it's great, that's not
9 going to make it any better.

10 I also want to note that I believe the hot
11 air was here before the NRC got here. So, and also my
12 day started very early this morning on East Coast time.
13 So, if I say something that's unintelligible or you need
14 clarification, don't feel shy about asking for a little
15 more information.

16 Next slide, please, Steve. As Chip
17 indicated, I'm going to give a brief overview of some
18 high-level topics. And then we're going to step
19 through some of the more significant rule topics.

20 You'll note down at the bottom of the list
21 there's something called "Other." So, that means
22 you're free to ask anything you want irrespective of
23 the list that we've put on the slide here.

24 And then I'll give a very brief description
25 of the guidance document, too, because it's an

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1 essential part of this process.

2 Next slide, please. So, here's a slide on
3 some radiation doses and limits. This is from the NRC
4 public website.

5 You can see on the far left there is annual
6 nuclear worker dose limit of 5,000 millirem. And
7 that's in green.

8 In the middle there's the annual public
9 dose limit for NRC. That's in green also at a hundred.

10 There are some dose limits that are in this
11 proposed rule under 61.41 during the compliance period.
12 There's a 25 millirem dose limit. So, that's around
13 on this figure, the cosmic ray range or the dose from
14 your body type of range.

15 And then as previously mentioned by some
16 of the attendees here, there's a 500 millirem proposed
17 dose limit for the inadvertent intruder during the
18 compliance period. And so, that's comparable to the
19 average US annual dose that somebody gets.

20 Next slide, please. So, what is in this
21 proposed rule? We're proposing to amend our
22 regulations that govern low-level waste disposal.
23 Primarily, it's new and revised site-specific
24 technical analyses to demonstrate that performance
25 objectives are met.

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1 In addition to that, you're also going to
2 be able to use site-specific criteria for waste
3 acceptance based on the results of these analyses. And
4 I'll talk about that in more detail as we go through
5 the presentation.

6 The reasons why we were doing this was to
7 facilitate implementation and better align the
8 requirements with the current health and safety
9 standards.

10 So, that third bullet is a little bit out
11 of alignment. And that's kind of why we're doing it,
12 not what's in it.

13 The fourth bullet, though, is there are
14 requirements for defense-in-depth protections now.
15 That's a new requirement.

16 I would say that the existing low-level
17 waste facilities have a lot of features that are
18 defense-in-depth. They're defense-in-depth-like,
19 but this is a formal requirement to make an argument
20 that you've provided defense-in-depth protections in
21 your disposal facility, design and siting process.

22 This proposed rule would affect low-level
23 radioactive waste disposal licensees or license
24 applicants that are regulated by the NRC or the
25 Agreement States.

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1 Next slide, please. So, right now we have
2 four existing -- or four operating sites for commercial
3 low-level radioactive waste disposal in the US; of
4 course the US Ecology site here in Richland,
5 Washington; the Energy Solutions site in Utah; Waste
6 Control Specialists in Texas and Energy Solutions in
7 Barnwell, South Carolina.

8 As some of the attendees here discussed,
9 there are some, I'd say, legacy sites for low-level
10 waste disposal in addition to one closed site in Nevada.

11 And on the right-hand side here is just a
12 little bit of information about some compact
13 restrictions and the type of wastes the different
14 facilities can receive.

15 Next slide, please. So, at a high level
16 you might be asking, well, what does this mean for me
17 if I'm a regulator in Washington, or I'm a licensee,
18 or I'm a member representing public interests? What
19 is this all about?

20 This is just a slide that intended to
21 provide information at a high level and what types of
22 questions you might be asking.

23 So, how do I develop the right scenarios
24 for my performance assessment? We heard a comment
25 about scenarios relevant to Native Americans. That's

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1 part of this technical analysis process.

2 How can I demonstrate that my site is
3 stable for 10,000 years? Because we do have the 61.44
4 stability requirement that because of the types of
5 materials that this rule is applying to, we wanted to
6 be clear what we intend for it to apply to.

7 If you look at the existing regulation in
8 the Concept section, the NRC is pretty clear that
9 stability is a cornerstone of disposal. It says it
10 just in plain text in the regulation.

11 And some of that material, I think, has
12 been misinterpreted in the past. Traditional
13 low-level waste has a lot of high specific activity,
14 short-lived waste that decays very rapidly, and then
15 a very little amount or low amount of long-lived waste.

16 So, I'll show that on a figure, at least
17 a tiny figure in one of my slides and it's in the backup
18 slides.

19 So, what NRC intended, though, is that you
20 have stability for your disposal site for the type of
21 waste that you're disposing of.

22 So, now, if you're going to dispose of
23 material that's significantly different, that doesn't
24 get you out of the stability requirement that applied
25 before. We're still implementing it in the same way.

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1 I'll talk about that when I get to that section.

2 There's some requirements that are, I
3 would say, exclusionary. If you have those, you are
4 not going to meet the stability requirements, because
5 you've probably picked a poor site.

6 Other of the issues related to stability
7 are more performance-based or analysis-based. So, you
8 can tie those back to how they affect the other
9 performance objectives to demonstrate whether they're
10 significant or not, but we'll talk about that in more
11 detail as I go.

12 Some of the other things on the bubbles
13 here are what should I do to demonstrate my facility
14 includes defense-in-depth protections? Do I need to
15 do this performance period analysis for my site? Which
16 I'll talk about.

17 How do I demonstrate that I've minimized
18 doses for the protective assurance period? That's new
19 in this regulation and new to the low-level waste
20 analysis in the US. So, that's an area that we're
21 hoping we get a lot of comments on. And then how do
22 I develop my waste acceptance criteria for my site?

23 Next slide, please. This is a figure
24 designed to kind of convey how everything is fitting
25 together, because there are a lot of pieces and it can

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1 get kind of confusing.

2 So, at the top is your assessment context
3 and scenario development. That applies to all the
4 different types of analyses that you're doing to
5 demonstrate that the performance objectives are met.

6 On the right side is your defense-in-depth
7 protections. Those apply for the timeframes that are
8 on the left-hand side of the figure.

9 On the left-hand-side of the figure we have
10 our three timeframes. And going down from the top we
11 have the performance objectives for 61.41, 42 and 44.

12 So, as you can see in the graphic, the
13 timeframes and the performance objectives overlap.
14 There's two things that apply kind of to all the -- or
15 most of the different timeframes and the different
16 performance objectives. Those are that you develop
17 the appropriate assessment context and scenarios and
18 that you apply defense-in-depth protections and I'll
19 explain that as we go forward.

20 And as you review our regulation and our
21 guidance document, you know, maybe pull this figure
22 aside and have it there so you can kind of get a picture
23 of where you are and what we're talking about.

24 Next slide, please. So, the rule topics
25 that I'm going to cover in detail now -- and we'll break

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1 after each one, as Chip indicated, to give you a chance
2 to ask questions or make comments -- are the analyses
3 timeframes, the performance assessment, the intruder
4 assessment, the protective assurance period analyses,
5 the performance period analyses, the safety
6 case/defense-in-depth, waste acceptance criteria and
7 then other.

8 And I don't have any slides on other, but
9 basically feel free when we get through these other
10 topics to make comments that kind of are not falling
11 in these boxes.

12 Next slide, please. So, the first one
13 we're going to talk about are the analysis timeframes.
14 It's a very complex issue. There's lots of opinions.
15 They all tend to be different.

16 We analyzed it in great detail. We got a
17 lot of stakeholder input from a variety of different
18 groups. We developed a white paper that's indicated
19 here with the ML number so you don't have to try to
20 search our ADAMS and be frustrated at not finding
21 things, like we get.

22 The Commission directed changes to our
23 staff recommendation in the SRM-SECY-13-0075 that's
24 indicated here on this slide. And we are seeking
25 stakeholder input especially on the compatibility

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1 designation.

2 Because as this rule was put forward, the
3 Commission gave us direction that all the significant
4 provisions of the rule should be Compatibility B, which
5 would mean all the Agreement States would do the same
6 thing, essentially, as what's being proposed by the
7 NRC.

8 We know that's an important topic as I
9 think Diane had a question about it on the phone and
10 we've had a number of commenters at our previous
11 meetings interested in that topic.

12 Next slide, please. So, what did we do
13 when we came up with the analysis timeframes? We
14 considered the waste characteristics. These figures
15 that are here I don't intend for you to be able to see.
16 They're in the backup of your slide package. So, feel
17 free to go to the backup if you want to see in more
18 detail.

19 But at a high level, what did we consider
20 when we came up with the approach? We considered the
21 characteristics of the waste. That was a primary
22 consideration as you change from kind of traditional
23 commercial low-level waste to something that might be
24 significantly different.

25 We wanted to consider uncertainties and

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1 what do people do domestically, and what do they do
2 internationally? And then, also, what was the
3 Commission policy in this area in programs that may be
4 similar. So, decommissioning, high-level waste,
5 other areas, uranium mill tailing disposal.

6 So, we looked at all that information and
7 then made some recommendation for the approach. And
8 as I indicated, the Commission gave us some direction,
9 which is what it was implemented then in the proposed
10 rule package.

11 Next slide, please. What are the analysis
12 timeframe or the approach to the analysis timeframes
13 that we're proposing? It's what's called a
14 three-tiered approach.

15 It starts off with a compliance period that
16 starts at site closure and goes out to a thousand years
17 after that followed by the protective assurance period
18 which goes from the thousand years to 10,000 years.
19 And then after that is the performance period.

20 And the two performance objectives
21 indicated here, the 61.41 and 61.42, for each of those
22 performance objectives there's kind of different
23 criteria or standard that's applied for the different
24 timeframes.

25 And the idea was that as you're increasing

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1 in time, you're providing because of potentially
2 increasing uncertainty, you're providing more
3 flexibility to licensees and the decision-makers to
4 look at the information and make decisions.

5 And so, in the SECY-SRM-13-0075, this is
6 the three-tiered approach. The last tier, the
7 performance period is only applicable if you have
8 enough long-lived waste at your site. And I'll talk
9 about that when we cover that section, but I wanted to
10 indicate that now just so it's clear. All sites would
11 be doing the first two tiers. Some sites would
12 potentially do the last tier.

13 Next slide, please. Okay. So, these are
14 some definitions. We don't have a lot of rule text in
15 these presentation materials, because it would take
16 much too long to go through the rule text and kind of
17 the narrative that we want to present to you, but some
18 definitions we have included. These are important in
19 the analysis timeframe area.

20 I already verbally talked through the
21 compliance period, the protective assurance period and
22 the performance period. The one that I didn't is the
23 long-lived waste definition at the top.

24 This definition is intended to include
25 radionuclides that are long-lived or that have

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1 long-lived progeny.

2 So, anything that can generate a
3 long-lived isotope or that is long-lived itself is --
4 would be considered long-lived waste. And the
5 definition is there on the screen for you to read.

6 Next slide, please. So, in this area
7 we're seeking feedback on the overall approach. The
8 three-tiered approach.

9 We don't have to give comments
10 specifically on, say, the limits or criteria for each
11 of the different tiers, because I'm going to talk about
12 those as we go forward here.

13 But overall the three-tiered approach if
14 you have comments on the length of each of the periods,
15 this idea that the analysis timeframes will be
16 Compatibility B, which means everybody is going to be
17 using the same approach, and then also the long-lived
18 waste definition.

19 FACILITATOR CAMERON: Okay. Great.
20 Thank you. Thank you, David.

21 Let's start here in the room on the
22 timeframes. Do we have any questions or comments on
23 timeframe?

24 Gerry, go ahead.

25 MR. POLLET: Thank you. All right. I'm

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1 going to start with a site-specific issue here. Where
2 an existing site is co-located with a Superfund site
3 and has a release itself, it makes no sense to utilize
4 an analysis timeframe that is inconsistent with the
5 Superfund process.

6 Therefore, you should, at minimum, be
7 saying for any co-located site, e.g., for the US Ecology
8 site located in the center of the Hanford 200-area
9 National Priority List Superfund site, you must utilize
10 the same CERCLA timeframe of 10,000 years.

11 Otherwise, all you're doing is essentially
12 creating a future Superfund site in the middle of
13 Superfund sites. So, you're cleaning up everything
14 except the donut hole. And you're going to have to come
15 back again and do it again.

16 And, of course, it's contributing to a
17 Superfund site. So, there is no logical way to
18 separate from the obligation as a liable party where
19 you've got a release in the center of a Superfund site
20 and have a criteria for only 1,000 years when you're
21 using that analysis period of 10,000 years for all the
22 contaminated sites around it, which are resulting in
23 a mixed release from both the Superfund site and US
24 Ecology site, which properly should be part of the
25 Superfund site.

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1 So, regardless of anything else you do for
2 the national rule, you should be specifying that where
3 you're co-located with Superfund site, the analysis
4 period has to comport and be compatible and utilize the
5 CERCLA analysis timeframe.

6 And that leads us to what you should be
7 analyzing it for during that timeframe. And the answer
8 is you should be utilizing the same CERCLA standard and
9 ARARs, the applicable and relevant standards that the
10 Superfund site would use when you're co-located.

11 Otherwise, again, all you've done is
12 created a contaminated donut hole in the middle of the
13 Superfund site, which in this case since you have a
14 release and it exceeds those standards, having a
15 performance level for the analysis time period that is
16 weaker than the existing requirement for cleanup makes
17 absolutely no sense.

18 Regardless of what you do at the national
19 level and since you are looking at site-specific
20 analyses, you should have a rule that says where you're
21 co-located, you have to use the analysis timeframe and
22 the CERCLA applicable standard.

23 So, essentially this would be adopting the
24 reverse of the ARAR under CERCLA. So, you would be
25 adopting CERCLA as your applicable and relevant

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1 standard to be applied to any such site whereas normally
2 under Superfund cleanup site we say any other
3 applicable and relevant standard gets applied if it's
4 more protective than the Superfund standard.

5 I see you're nodding. So, I think that I
6 explained that pretty well.

7 MR. ESH: I understand your comment.
8 Yes. Uh-huh.

9 MR. POLLET: And it's very important that
10 we do this, because the other piece of this that relates
11 is that the NRC standards for the general public.

12 And as I discussed earlier, here you have
13 an exposure scenario where it is reasonable and
14 accepted as part of the Superfund cleanup that the
15 exposed public is going to include the exercise of
16 treaty rights by Native Americans. And that is a very
17 different scenario than the general public that you use
18 for the application and it results in a much higher dose
19 from the same release. And it results in a much higher
20 uptake under different scenarios such as whether it's
21 fish consumption, or it is a sweat lodge or what crops
22 are being used.

23 So, it's important that it not just be
24 utilized for the general population, but for the
25 reasonably expected population.

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1 In this case, regardless of any other
2 consideration when you have a treaty right as I said
3 earlier, you can't delegate this to the State. You
4 have to explicitly recognize how this would impact the
5 treaty right and protect to the same level that you
6 would expect to protect the general population, too.

7 Thirdly, given that we're talking about a
8 hazard period for uranium as a key component to this,
9 it seems imperative that you begin consideration
10 explicitly of the toxicological hazard for uranium
11 disposal in large quantities, which was never
12 considered in the past rules and it's not your
13 wheelhouse, typically.

14 This goes back to the comments about NEPA.
15 NEPA requires you to consider whether or not it is in
16 your regulatory purview, but you still have to consider
17 what the same release to meet your standards under the
18 10 CFR Part 61 are, what the impact would be for the
19 toxicological hazard. And that takes us right back to
20 the Superfund rule and reason why it should be utilized.

21 And finally, I would say that in defining
22 how you determine what the health impact is instead of
23 using a dose-based model, you should be using a
24 risk-based model as we do for Superfund sites.

25 I know you've heard this a thousand times,

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1 but you should not be ignoring the National Research
2 Council's BEIR VII report. You should be utilizing
3 that regardless, and not the ICRP modeling.

4 You should be utilizing BEIR VII and as I
5 said earlier, what is shocking here is that in this day
6 and age we are talking about a 500-millirem dose or even
7 a 25-millirem dose as being acceptable for populations
8 when we now know that an adult woman's risk level is
9 60 percent higher than adult males, children are
10 significantly higher, and that 25 millirem translates
11 into a 15 additional excess fatal cancers for every
12 10,000 people exposed on average. And again with women
13 and children generally being higher.

14 So, it is time to come into the 21st century
15 and use BEIR VII and the National Research Council's
16 consensus-based recognition of what the hazard is from
17 a specific dose and not the ICRP. Thank you.

18 FACILITATOR CAMERON: Okay. Thank you,
19 Gerry.

20 Anybody else here in Richland in the room
21 that wants to comment?

22 MR. ESH: I have one question.

23 FACILITATOR CAMERON: Go ahead.

24 MR. ESH: Just so I understand. So, those
25 are all good comments. I think I understood them all.

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1 And your first one about the -- I think you were talking
2 about the compliance period, basically.

3 What you're recommending is a 10,000-year
4 compliance period, not the two-tiered approach of the
5 thousand-year compliance period followed by the
6 10,000-year protective assurance period.

7 MR. POLLET: That is what I'm recommending
8 in our --

9 MR. ESH: Okay.

10 MR. POLLET: -- Heart of America
11 Northwest's general comment is absolutely that we
12 should be using a 10,000-year compliance period.

13 MR. ESH: Okay.

14 MR. POLLET: And what I'm saying is should
15 the NRC ignore the public's concern about that and
16 choose to use 1,000 for any site that is located in an
17 NRC-regulated site under this rule that is located
18 within a Superfund site, you should say you must use
19 the analysis that we use under Superfund, which -- and
20 examine out to 10,000 years if that is what is being
21 done for the decision documents for the rest of the site
22 by another Federal agency.

23 MR. ESH: And one comment for you, and I
24 don't know if it's an enhancer or not, but just for your
25 information I'll talk about the performance assessment

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1 and scenarios and receptor scenarios.

2 Our guidance and our regulation basically
3 says to evaluate -- if you're moving to this approach
4 of site-specific analyses, then part of that is
5 site-specific receptor scenarios.

6 We don't define what those may be, because
7 every site is different, you know. Here in Washington
8 you may have different groups of receptors that have
9 certain scenarios or receptor scenarios associated
10 with them.

11 So, we basically give guidance about that
12 the receptor scenarios you should evaluate should be
13 reasonably foreseeable. I don't know. There's
14 language in the rule you can look at. Specific
15 language how to define the scenarios. And then the
16 guidance document goes through that, too.

17 So, you know, the comment about, well,
18 there are special scenarios you should consider, hey,
19 if there's special scenarios at your site that you
20 should consider, yeah, you should consider them.

21 And that's basically what we say or what
22 should be interpreted. It's the way our regulation and
23 guidance are written.

24 FACILITATOR CAMERON: Okay. Let's
25 revisit that when we get there.

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1 MR. ESH: We'll cover that in more detail.

2 MR. POLLET: Can I ask just a
3 clarification comment?

4 FACILITATOR CAMERON: Gerry, we have to
5 get you on the transcript here, but we are coming back
6 to this issue, as Dave noted.

7 MR. POLLET: So, to clarify, if you're
8 doing your site-specific risk assessment, are you
9 proposing to change the standard to the reasonably
10 foreseeable maximum exposed set of individuals, or the
11 general population?

12 MR. ESH: Right. We -- our receptor is
13 still something that's called the average member of the
14 critical group.

15 So, the critical group is the people that
16 are going to be exposed to the radiation that are
17 released from the site, say, a down-gradient in a plume
18 direction if it's in water, or in the main direction
19 of the windrows if it's downwind.

20 But basically they're going to be the ones,
21 you know, because people could live in any direction
22 around the site. And some of them are going to be in
23 the upwind direction and not get much exposure. The
24 ones in the downwind are going to get the most exposure.

25 So, the concept is the average member of

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1 the critical group. That's the critical group. And
2 then you take the average member of it, but the specific
3 behaviors and characteristics of that group in terms
4 of their actions, how they live, what their pathways
5 are, all those sorts of things, that's within this
6 reasonably foreseeable receptor scenario development
7 that there's language in the rule, as I indicated, in
8 the proposed rule and then definitely in the guidance
9 document, about defining your scenarios.

10 FACILITATOR CAMERON: Okay.

11 MR. MCKENNEY: As a clarification, yes,
12 average member of the critical group is very, very
13 similar to a reasonably maximum exposed individual.

14 You are looking at the higher activities
15 and higher extent. You aren't averaging over the
16 entire population at all.

17 FACILITATOR CAMERON: So, and, David,
18 you're going to -- we'll come back to this. Let's go
19 to Mikel.

20 MR. ELSEM: Hi. I'm Mik Elsem. I'm with
21 the State of Washington Department of Health.

22 I was wondering if the NRC has developed
23 a listing of which radionuclides it considers long
24 lived.

25 MR. ESH: Right. Yes, there's a table in

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1 the guidance document that gives you kind of a list of
2 long-lived isotopes and then which ones we generally
3 think are part of a low-level waste performance
4 assessment inventory.

5 And I'll show you that table, actually,
6 later in this presentation. So, it's not a -- it's not
7 a checklist, say, in the regulation. If it's on this
8 list, it's long-lived. And if it's not on this list,
9 it's not.

10 We don't have that, but we do have a table
11 in the guidance document to give kind of if we were
12 reviewing something, what would we look at for what's
13 long-lived and to help an Agreement State regulator do
14 the same thing, yeah.

15 FACILITATOR CAMERON: Okay. Thank you.
16 Susan, anybody on the phone have a question or comment
17 on this particular topic?

18 TELEPHONE OPERATOR: As a reminder if you
19 would like to ask a question, please press star one on
20 your touch-tone phone.

21 Currently there are no questions in the
22 queue.

23 FACILITATOR CAMERON: Okay. Thank you,
24 Susan. Let's go to the performance assessment.

25 (Off-microphone comment.)

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1 FACILITATOR CAMERON: Oh. Ask Gerry for
2 a specific CERCLA reference to a 10,000-year period
3 discussion. I am not aware of any reference to 10,000
4 years in CERCLA.

5 Gerry, I know you guys are getting ready
6 to leave, but do you think that you could respond to
7 this? You don't have to, but here is a specific
8 question -- information -- question about CERCLA.

9 MR. POLLET: So, when you have Federal
10 facilities that are utilizing a 10,000-year time period
11 because that's what's been determined reasonable under
12 CERCLA or other decisions, that's what you should be
13 using.

14 And so, for the Hanford site and, for
15 example, tank closure and waste management EIS done by
16 the US Department of Energy with the State and EPA's
17 cooperating agencies examined out to 10,000 years.

18 FACILITATOR CAMERON: That's a
19 Hanford-centric CERCLA decision, not a general CERCLA
20 standard; is that correct?

21 MR. POLLET: CERCLA has a flexible set of
22 standards essentially that it is far from -- it would
23 not be the only site that would be using 10,000 years.

24 That is -- and that is generally the rule
25 for other sites. People may recall that was the

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1 dispute over Yucca Mountain and EPA's groundwater
2 standards there.

3 FACILITATOR CAMERON: Okay. Thanks,
4 Gerry.

5 Dave, want to go to the performance
6 assessment?

7 MR. ESH: Sure.

8 FACILITATOR CAMERON: All right.

9 MR. ESH: Okay. The next topic is the
10 performance assessment, which is one of the integral
11 cogs of this rulemaking process moving to site-specific
12 analysis.

13 This is a high-level picture of
14 performance assessment. Essentially you're taking a
15 real system. You're going to develop some sort of
16 mathematical model or abstraction of that real system
17 to estimate future performance. And an essential
18 component in that is model support.

19 So, performance assessment, it can have a
20 couple different flavors to it. So, if you're, I would
21 say, trying to do a regulatory analysis, it might be
22 more like what I would describe a calculation rather
23 than a model.

24 If you're conservative in all your inputs
25 and your scenarios and you're basically propagating

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1 that through and you have a lot of margining in your
2 system, you may be doing a calculation, not necessarily
3 a model.

4 If that's not the case, though, if you're
5 trying to really represent a system, some real system
6 and all its features and data and the uncertainty, then
7 you're more in line with doing a modeling process. And
8 that's where this model support component comes in and
9 can be very important.

10 Next slide, please. So, the model
11 support, there is a requirement now in the proposed Part
12 61 under 61.13 to provide model support for your
13 performance assessment.

14 And this is a graphic showing that the
15 components of that can include past, present and future
16 conditions.

17 So, present might be lab and field
18 experiments. Past might be analogs and historical
19 data, you know.

20 At the Hanford site, on one hand you have
21 a lot of historical releases from DOE facilities and
22 other things. On the other hand, that provides a lot
23 of information about how the system works. So, that's
24 a valuable source of information you should use in your
25 performance assessment for the low-level waste

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1 facility if you're able to.

2 And then, you also collect some future
3 monitoring data and may be able to do some long-term
4 experiments, because there's always going to be
5 uncertainties that you can't resolve maybe at the time
6 that you're making a decision.

7 So, the long-term experiments can come
8 into play to really help confirm the decisions you may
9 make at the time of licensing.

10 Next slide, please. The performance
11 assessment requirement that we're proposing now is not
12 a new topic. We think it's a move from things that are
13 implicit in the regulation to making them explicit.

14 So, the proposed modifications modernize
15 the technical analysis requirements. We have new
16 requirements in 61.13 related to the performance
17 assessment in, I would say, three main areas.

18 It's scope. So, how did you ensure that
19 you did the right analysis for your problem, included
20 the right things in the analysis?

21 There's a requirement to consider
22 uncertainty and variability. Right now 10 CFR Part 61
23 does not mention uncertainty in 61.13.

24 And then as I talked about in the previous
25 slide, there's now a requirement to provide model

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1 support for your calculations, because it's really key
2 if you're moving to a more heavily technical
3 analysis-based approach that you provide support for
4 your calculations.

5 Now, the model support that you're going
6 to be doing is not traditional model validation.
7 You're not building a bridge and designing the beams
8 and go out and measure things. It's not that type of
9 support.

10 You're doing a projection into the future.
11 So, you're going to bring more inferences together, a
12 collection of inferences to provide support for your
13 calculations.

14 So, it's not traditional model validation.
15 That's why we use the terminology "model support." And
16 so, if you're a licensee or Agreement State regulator,
17 I want you to understand that it's a little bit
18 different than model validation because nobody's,
19 hopefully, going to be there to observe the effects many
20 years in the future.

21 There is a requirement to update the
22 performance assessment at closure. We think that's
23 practical. Because as the facility operates for a long
24 period of time, you're going to collect information
25 about how the different design features that you've put

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1 in are working. And also you may have monitoring data
2 and other observations that you can factor into the
3 final safety analysis for your facility.

4 One other change that we did is we modified
5 the siting characteristics consistent with the
6 disposal of long-lived waste.

7 And what I mean by that is if you look at
8 the current 61.50, there's a bunch of requirements in
9 there. Some of them that are exclusionary. So, you
10 can't be in the zone of water table fluctuation, you
11 can't be in a hundred-year flood plain.

12 They're mainly water-centric type of
13 characteristics. Which at the Hanford site that's
14 pretty good for you guys, but in other locations they're
15 much more important.

16 When early low-level waste facilities were
17 done, some of the legacy sites, a lot of them had
18 problems with water and they didn't perform very well.
19 Didn't perform as anticipated from a water perspective.

20 That's part of the reason why our
21 regulations, 10 CFR Part 61, were created to begin with.

22 So, those siting characteristics are
23 modified now. Basically, they're cleaned up.
24 They're broken up into two sections. You have some
25 that are still exclusionary for a 500-year period, and

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1 then you have some that are, I'd say, more, I guess,
2 performance-based where you can look at them as how
3 they're going to affect the risks from the facility with
4 respect to 61.41 and 61.42 to determine whether those
5 siting characteristics are -- have been achieved or
6 not.

7 In addition, the hydrology-related siting
8 characteristics after 500 years can be evaluated
9 performance-based also. Because when we talked about
10 it, we said, okay, how is somebody going to demonstrate
11 that they're not in a hundred-year flood plane for
12 10,000 years. That seems kind of like an intractable
13 problem to me.

14 What we want to make sure is that the safety
15 analysis is appropriate and that proper safety has been
16 achieved.

17 And when you get through that period where
18 a lot of the high-specific activity short-lived waste
19 has decayed, then your system is much more resilient
20 from a water release perspective.

21 Some of those high-specific activity
22 radionuclides if you get a bunch of water in early and
23 get them released, that it only takes a little bit of
24 them to cause a real risk problem. So, that's
25 conceptually what we did there and why we did it.

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1 Next slide, please. So, the performance
2 assessment, it's this iterative process where you go
3 through and collect data, develop conceptual models,
4 numerical models, combine the effects -- combine the
5 models and estimate the effects and then iterate as
6 needed.

7 These are the various requirements in the
8 regulation related to performance assessment. Four of
9 them are represented in 61.13. And then as I
10 indicated, there's a 61.50 modifications we did and the
11 61.28 to update the performance assessment at closure.

12 And also related to that is 61.58 where now
13 to develop waste acceptance criteria you can do it on
14 a site-specific basis and use the results of your
15 performance assessment. And I'll talk about that in
16 more detail when we get to a different section.

17 Next slide. So, this is the definition of
18 performance assessment. It's pretty plain, but
19 contains a lot of power there.

20 It's basically an analysis identifying
21 your features, events and processes that might affect
22 the disposal system; examines the effects of those on
23 the performance of the system and then estimates the
24 annual dose to any member of the public caused by all
25 significant features, events and processes, not all

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1 features, events and processes. All significant
2 features, events and processes.

3 Next slide, please. This is an example
4 from the guidance document. It's a hazard map. So,
5 we did a whole variety of these related to site
6 characteristics.

7 We have a GIS individual who is pretty
8 skilled at this sort of thing. And so, we took a
9 variety of the siting characteristics and had him make
10 hazard maps as a review tool for a licensee or an
11 Agreement State regulator or a member of the public that
12 wants to challenge something.

13 They can look at the hazard maps and say
14 -- the resolution of the hazard maps from the GIS
15 perspective is not fine enough to say if you plopped
16 the US Ecology site in Hanford down there and it was
17 in a black area, oh, look, it's bad, it's in the black
18 area. The resolution of the analysis is not at the
19 level to be able to do that.

20 What it would indicate is I may need to look
21 at this process if this is potential flooding. I may
22 need to look at flooding in more detail and see how the
23 licensee and the Agreement State regulator evaluated
24 potential flooding at this particular location. So,
25 that's what the hazard maps are. It's just an example

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1 from the guidance document.

2 Next slide, please. What we're seeking
3 feedback on in the area of performance assessment is
4 at the highest level should you even be doing this
5 technical analysis-based approach to evaluate disposal
6 of long-lived waste?

7 We had some discussion early on from some
8 stakeholders that that's not the right approach to go.
9 Ultimately, we decided that's what we were proposing,
10 but we still want to get some feedback on that.

11 And then the specific new technical
12 analysis requirements in 61.13, we're seeking feedback
13 there, as well as on the modifications to the siting
14 characteristics and the requirement to update the PA
15 at closure.

16 FACILITATOR CAMERON: Any commentary here
17 in the room?

18 Yes, and please introduce yourself, sir.

19 MR. APTED: Mick Apted with INTERA.

20 Can we go to Slide 15 --

21 MR. ESH: Sure.

22 MR. APTED: -- on your presentation, Dave?
23 Yeah, that one. And to the left there I think you've
24 got a very important vertical red arrow there pointing
25 in both directions between real systems and your model

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1 support.

2 Can you give me some ideas of in what way
3 that sort of interaction and what sort of evidence
4 either from real systems or, you know, giving you
5 confidence in your model results or, you know, it's
6 rather vague.

7 MR. ESH: Right.

8 MR. APTED: It's just sort of showing the
9 connection and could you sort of articulate a little
10 bit about what you see going on in that arrow?

11 MR. ESH: Well, in the one other figure
12 that I had on the model support, it gave types of
13 information that you may use to provide support for your
14 model. So, lab and field experiments, observations,
15 monitoring data, analogs, those sorts of things.

16 That would be kind of the flow from the real
17 system to this model support, but then, you know, as
18 one other diagram indicated, the performance
19 assessment process is iterative.

20 So, as you collect that information, it may
21 feed back to your real system. You may change the
22 design in your system, for instance, or you may decide,
23 oh, my infiltration barrier is not going to be
24 sufficient based on what I'm learning here. I need to
25 beef up my infiltration barrier to account for, you

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1 know, processes X, Y and Z.

2 So, that's kind of the idea of the feedback
3 or the potential flow between those different areas.

4 MR APTED: Yeah, and those are good
5 examples. I think one problem we all recognize,
6 though, is that the evolution of the system can be so
7 slow initially that the real systems, nothing has
8 happened in 50 years, a hundred years, 200 years.

9 And so, it creates a problem of using real
10 system data rather than, let's say, archaeological
11 analogs or natural analogs that would fit in.

12 But real systems, I see a difficulty
13 because the system is inert, you know, rather
14 unreactive for long time scales compared to the
15 licensing process.

16 MR. ESH: Right. And you're absolutely
17 correct. I mean, well, there's two competing
18 processes that go on.

19 Sometimes you can have some initial
20 instability in the system with respect to, I'd say,
21 geotechnical changes in the system when you first
22 install it or you kind of get through that
23 troubleshooting process of some new systems you may put
24 in place.

25 But in general, though, if you put in the

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1 geomembranes and cementitious materials, those sorts
2 of things are going to be pretty resilient at least for
3 the few hundred year timeframe that you aren't going
4 to see much happening.

5 So, that's why we advocate making use of
6 all the sources of information you may have, especially
7 analogs. Because when you get one answer to a
8 long-term question, that's really the only thing you
9 can do.

10 You can do some long-term experiments, but
11 you're running -- depending on the phenomenon that
12 you're looking at, you can run into trouble there even
13 using the long-term experiment.

14 FACILITATOR CAMERON: Good. Thank you.
15 Thank you. Anybody else in the room on this topic?

16 (No questions.)

17 FACILITATOR CAMERON: Okay. Susan, can
18 you see if anybody on the phones has something for us?

19 TELEPHONE OPERATOR: Thank you. As a
20 reminder if you'd like to ask a question, please press
21 star one. And currently we have no one in the queue.

22 FACILITATOR CAMERON: Okay. And, Susan,
23 on the next topic I think we'll start with the people
24 on the phones and then go to the audience.

25 And this is the next topic, intruder

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1 assessment.

2 MR. ESH: Right. Intruder assessment is
3 the -- is the new technology analyses that you need to
4 perform for 61.42.

5 So, in the current Part 61 you don't
6 perform an intruder dose assessment. If you can
7 demonstrate that you've accepted waste that meets the
8 waste classification tables and there's some other
9 requirements associated with intruder barriers and
10 waste segregation, that sort of thing, that's what you
11 need to do to demonstrate 61.42.

12 But as you move to an approach where the
13 types of waste you take might be significantly
14 different than was analyzed by the NRC when developing
15 the EIS, then either the regulator would have to do this
16 intruder dose assessment to determine what type of
17 waste you could take, or we thought it was better if
18 it's done on a site-specific basis because then you can
19 reflect all the specific environmental parameters,
20 receptor scenarios and other characteristics of this
21 calculation in your particular analysis.

22 So, this is a picture of the types of things
23 that may happen in an intruder assessment. It's
24 basically somebody uses the area, the controlled area
25 of the site.

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1 NRC does not anticipate that people are
2 going to use the controlled area of the site. There's
3 passive controls that are put in place for the long term
4 such as Federal and state ownership of the land after
5 closure, but in the early 1980s and even today they --
6 NRC basically said we can't ensure that anybody is not
7 going to use this site.

8 So, we're going to apply this performance
9 objective with a higher dose limit, the waste
10 classification tables in the current regulation were
11 developed using an intruder dose assessment with a 500
12 millirem dose limit.

13 What we're proposing in the current
14 regulation is a site-specific intruder dose assessment
15 with a 500 millirem dose limit.

16 It's no different in terms of the dose
17 limits that are applied between the two analyses. It's
18 just a matter of who's doing the analyses and what
19 parameters are they putting into it.

20 Next slide, please. So, this inadvertent
21 intruder assessment is a new analyses. We propose
22 modifications to require a stylized analysis instead
23 of relying on the waste classification and underlying
24 generic analysis.

25 There's new requirements in 61.13

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1 associated with it that are similar to what was done
2 for the performance assessment regarding getting the
3 scope right, providing for intruder barriers and then
4 considering uncertainty and variability.

5 The intruder assessment is a little bit
6 different, though, in that we recommend in our guidance
7 document that a stylized approach be taken for it and
8 a conservative approach.

9 Because as you change the intruder
10 scenario from somebody that has very little exposure
11 to the waste to one that somebody has a lot more exposure
12 to the waste, the dose results can change by many orders
13 of magnitude.

14 So, you want to be cautious that you don't
15 choose a very non-conservative scenario and then
16 sometime in the future decide through whatever process
17 that maybe another scenario is relevant and then you
18 could create a challenge for yourself.

19 So, the idea is be smart about it, be
20 conservative and provide enough margin in the analysis
21 that you can withstand challenges from people that may
22 consider other scenarios.

23 Next slide, please. So, this is a figure
24 from the guidance document. We have some flowcharts
25 in there.

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1 So, it's not just all words and text you
2 have to read through. But if you like to -- if you're
3 the type of person that likes to step through a diagram
4 and do steps A through whatever, you can do that. I
5 think that's all I need to say here. Dose limit of 500
6 millirem for the compliance period.

7 So, we're seeking your feedback on the
8 revised and new definitions for the intruder
9 assessment.

10 There is a definition for the intruder
11 receptor that is important for you to look at.
12 Basically, you consider reasonably foreseeable
13 scenarios of the intruder at the time of site closure.

14 To me, I did not like that wording at all.
15 I felt that that was going to be difficult to implement
16 because, to me, it's saying you have to forecast when
17 your site is going to close and what people are going
18 to be doing at that time of closure. And I thought that
19 would be difficult, but we're seeking feedback on that
20 specific language regarding the intruder assessment
21 scenarios.

22 And then the other things here on the
23 slide, I don't need to read those.

24 FACILITATOR CAMERON: Okay. Susan, can
25 you see if anybody on the phone has something on

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1 inadvertent intruder assessment?

2 TELEPHONE OPERATOR: Yes, we have a
3 question from Diane. Go ahead. Your line is open,
4 ma'am.

5 MS. D'ARRIGO: Hi. It's Diane, Nuclear
6 Information and Resource Service.

7 Two things. One, you said that the 500
8 millirems is exactly the same as the 500 before, and
9 that's not true.

10 Aren't we also changing to millirems
11 effective dose equivalent, but for two-thirds of the
12 isotopes the allowable concentrations per millirem
13 actually go up. Some stay the same and some go down,
14 but it's sort of a minor point comparing 25 millirems
15 to 500 millirems and the kind of improvements that you
16 should be making with making new rules that are
17 providing greater protection, but the fact that you're
18 changing 500 millirems to 500 millirems effective dose
19 equivalent means that it's not exactly the same. That
20 you've going to have more radioactivity that's
21 permissible.

22 MR. ESH: Right. You're correct with
23 your first comment. The dosimetry -- I shouldn't have
24 said the --

25 MS. D'ARRIGO: You're fading in and out.

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1 I'm sorry. What did you say?

2 MR. ESH: I said you're correct with your
3 first comment. The dosimetry is different between the
4 previous analyses and what's in the proposed
5 regulation.

6 MS. D'ARRIGO: Okay. So, and then the
7 next is how do you deal with, or do you care, that there
8 is a pretty apparent conflict of interest in having the
9 operator of the facility do the analyses to determine
10 whether their site can meet the criteria when there's
11 no -- there's no penalty. There's no way of verifying
12 or determining whether their analyses are correct.

13 It's variable to do these assessments
14 probably without even the public having access to the
15 calculations or the assumptions when the results are
16 such a clear ability for them to make more money by
17 taking more and different types of waste.

18 MR. ESH: Right.

19 MS. D'ARRIGO: I just don't understand how
20 this -- this is going to be done in an objective manner.

21 MR. ESH: Right. That's a good comment,
22 Diane. We received that comment before and I think
23 somebody put it you're putting the fox in charge of the
24 henhouse, is the way they put it, which I thought was
25 a good way to describe it.

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1 And my response is basically under 61.41
2 now it's the same thing. The licensee is doing that
3 analysis.

4 What's required any time that you're
5 moving to a more technical analysis-based approach,
6 there are a couple things.

7 One, that you have a competent regulator
8 that can review those analyses. Two, that the
9 information supplied by the licensee and the review by
10 the regulator are both available information to anybody
11 like yourself that wants to review them and consider
12 them.

13 I mean, when I -- I have to give kudos to
14 the State of Washington. When I wanted to look up
15 performance assessments, I had no trouble finding
16 theirs and looking at the information that was in it.
17 The reports were available. I could access them.

18 That isn't necessarily all the case for
19 other programs, but I think it should be. And you made
20 that comment earlier and I think somebody else made that
21 comment. We understand it, it's a good comment and
22 we'll look at it.

23 MS. D'ARRIGO; How are you going to have,
24 I mean, so you -- perhaps some of the information will
25 be made public.

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1 Will there be an opportunity for
2 intervention or challenge if someone can show that the
3 analysis is not being done?

4 I mean, is it going to be -- will there be
5 a rulemaking? Will there be an amendment? Will there
6 be something that requires some kind of -- would allow
7 for an adjudicatory step on the State level if it's a
8 State-licensed facility, and on the Federal level if
9 it were NRC licensed?

10 MR. ESH: I'm not an expert on each of the
11 States' programs or their requirements, but I know from
12 an NRC standpoint we have an adjudicatory process in
13 the licensing decision where after you've looked at
14 that information, you can raise your challenges.

15 I would hope that the State programs have
16 that, too, but I don't know. I don't know the answer
17 to it.

18 FACILITATOR CAMERON: But, I guess, point
19 --

20 MS. D'ARRIGO: Requirements in the --

21 FACILITATOR CAMERON: -- well taken,
22 Diane.

23 MS. D'ARRIGO: -- rulemaking that are in
24 the proposed rule that are requiring notification of
25 the public an opportunity for input at each of these

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1 times.

2 It appears that the analysis can be done,
3 a proposal comes in, the analysis is done and that's
4 it. No one would ever even know that it's happening.
5 There's no requirements that I see for publicizing
6 these applications.

7 FACILITATOR CAMERON: Diane, are you
8 suggesting that the NRC should have something in the
9 proposed rule about what type of process a State should
10 use in providing information to the public?

11 MS. D'ARRIGO: I'm saying that if the NRC
12 is going to change its regulations to allow for so much
13 more leeway and more decisions to be made and analyses
14 to be done by those who stand to profit, there ought
15 to be an opportunity for those to stand to suffer, those
16 who stand to receive these doses, to at least make the
17 arguments. And the way that it's currently done,
18 there's not that kind of process.

19 Now, if you're going to make it a verbatim,
20 the same requirement for the States, then that would
21 be a requirement. I mean, the States would have to do
22 it at least as stringently as the Feds. And then if
23 you're making it verbatim the same, then they'd all be
24 equally as bad or good.

25 FACILITATOR CAMERON: Okay. And, NRC, do

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1 you have Diane's --

2 MR. ESH: Right. I understand.

3 FACILITATOR CAMERON: -- drift on that
4 one?

5 MR. ESH: I understand her comment.

6 FACILITATOR CAMERON: Okay.

7 MR. ESH: All I can say is that I agree that
8 the information should be available for anybody that
9 wants to evaluate it.

10 I mean, it may not be a fun part of your
11 job if you're a licensee or an Agreement State
12 regulator, but it's part of your job just like it's part
13 of my job. So, the information should be available.

14 And in some cases where I've looked for it,
15 I've had no trouble finding it, but not in all cases,
16 you know. So, the revised or proposed performance
17 assessment for Clive to dispose of depleted uranium,
18 that information is all available on the Utah -- the
19 State of Utah's website I was able to find it. So, just
20 a few data points for you.

21 MS. D'ARRIGO: But that's under the
22 current situation. The new one could be different, it
23 appears.

24 And then the last point that I wanted to
25 make is that you said, well, you have a competent

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1 regulator.

2 Well, it may be competent, but your goal
3 isn't the same as what those of us who would like to
4 prevent being exposed would be.

5 And so, I mean, even the way these
6 questions are written and every time you do a proposed
7 rulemaking your little bubble -- the clouds with the
8 different questions about how do I do a performance
9 assessment, how do I -- what do I put into it, what do
10 I have to prove, think about having little clouds for
11 those of us that would like to prevent our exposures,
12 that would like to only allow what's in there, what the
13 site has a chance of isolating and what steps do we have
14 to take.

15 The NRC isn't even pretending to care about
16 the other side, those of us that are going to receive
17 these doses. And that's as usual, but it's very
18 frustrating.

19 FACILITATOR CAMERON: You said we're not
20 pretending to care about you? I didn't hear --

21 MS. D'ARRIGO: You're not even
22 pretending.

23 FACILITATOR CAMERON: We're not even
24 pretending. Okay.

25 MS. D'ARRIGO: I mean, sometimes you'll

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1 use some language that makes it appear to be concerned
2 about what the public thinks.

3 But in this situation in this rulemaking
4 and in these receipts for comments and in the meetings
5 that you've had and the failure to notify the public
6 of some of the meetings like the ones right here in D.C.
7 where groups in D.C. might have been able to
8 participate, no.

9 You're clearly geared toward allowing more
10 types of waste and longer-lasting waste into these
11 facilities, because you don't have anywhere else to put
12 it.

13 And the kind of analyses performance
14 assessments that are going to be allowed are not even
15 in any way -- there's no guarantee that we're going to
16 even know that these analyses are being done let alone
17 have resources to be able to intervene, have access to
18 the computer codes that are used, understand the
19 assumptions that are being made, you know.

20 All the stuff that you have to do when you
21 said, oh, yeah, you went and looked at the Utah site
22 and it was very -- you were able to get your information
23 and in Washington, too. But if the public doesn't even
24 know that their site is considering it, then they're
25 not going to be able to do that. So, there needs to

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1 be some process.

2 FACILITATOR CAMERON: Okay. Thank you.
3 Thank you, Diane.

4 MR. ESH: Diane, Chris Grossman put up on
5 the screen that 61.25 specifies the notice to the
6 Commission for changes to the WAC.

7 So, the WAC would be the connection to the
8 technical analyses that's used to specify the waste
9 concentrations that are appropriate for the site.

10 You can look at 61.25 if you're interested.

11 FACILITATOR CAMERON: And WAC stands for
12 --

13 MR. ESH: Waste Acceptance Criteria.

14 FACILITATOR CAMERON: Okay. Thank you,
15 Diane.

16 Susan, is there anybody else on the phone?

17 TELEPHONE OPERATOR: We have no one else
18 in the queue at this time.

19 FACILITATOR CAMERON: Okay. Well, let's
20 see if anybody in the room has anything on inadvertent.

21 (No questions.)

22 FACILITATOR CAMERON: Okay. Let's go to
23 the next topic.

24 MR. ESH: The next topic is the Protective
25 Assurance Analyses, which, as I indicated earlier, is

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1 a new analyses.

2 This is the second tier of the analysis
3 timeframe approach. It's required for all types of
4 low-level waste.

5 What we're proposing is an
6 optimization-type process rather than comparison to a
7 dose limit, but the goal is to minimize doses.

8 So, that can mean different things for
9 different sites, because that's the way optimization
10 works, but the goal is to make them as low as possible.

11 The simplest approach the staff recommends
12 in the guidance document is to extend the performance
13 assessment and trigger assessment analyses.

14 If you've already developed those for the
15 compliance period, we feel the least burdensome
16 approach is simply to extend them to this longer
17 timeframe.

18 Our approach in the guidance with respect
19 to this optimization is that high risk should be
20 associated with high effort, and low risk should be
21 associated with low effort.

22 Next slide, please. This is a figure from
23 the guidance document on Slide 29. It's Figure 6-1
24 that kind of shows how we structured this in -- the
25 protective assurance analysis in the guidance

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1 document.

2 We define some levels starting with a few
3 millirem and then up to 500 millirem as given by the
4 proposed rule language from the SRM and the Commission
5 that your effort increases, basically, as you move up
6 the dose scale.

7 So, when you're at a few millirem, you have
8 very minimal effort associated with the second tier of
9 the analysis. If you're at the high dose levels, then
10 you're going to have much more effort associated with
11 it, as you probably should.

12 Next slide, please. What we're seeking
13 feedback on is this overall approach using optimization
14 and the target of minimization in the guidance, the
15 extension of the performance assessment and trigger
16 assessment through the protective assurance period,
17 because that's in guidance.

18 There are other approaches that you could
19 potentially use to do this analyses. We thought that
20 the extension of those two types of analyses would be
21 the most straightforward.

22 And optimization, as I indicated, with the
23 minimization target, and then what I would say is
24 risk-based discounting. That's that upside down
25 pyramid I showed you on the previous slide.

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1 I think that's it for this one.

2 FACILITATOR CAMERON: Anybody here in
3 Richland, comments, questions?

4 (No questions.)

5 FACILITATOR CAMERON: Susan, can you see
6 if there's anybody on the phone that has something?

7 TELEPHONE OPERATOR: Yes, of course.
8 Thank you. We do have one question that was just at
9 the start of the topic.

10 John Greeves, your line is open. And if
11 anyone else would like to ask a question, please press
12 star one.

13 MR. GREEVES: Yeah, this is John Greeves.
14 This is a catchup question. I'll try and be succinct.
15 This is regarding the previous states.

16 I'd like to get some feedback on what is
17 the status of Beatty, Nevada; West Valley, New York;
18 Maxey Flats, Kentucky; Sheffield, Illinois.

19 And perhaps maybe by tomorrow night's
20 meeting you can tell the audience if you can do some
21 research by then, what the status is.

22 I can't imagine reopening the Beatty,
23 Nevada case, but that's just a personal opinion. And
24 Maxey Flats and Sheffield, I think, are CERCLA
25 closures. I think they're in a category, but for

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1 completeness, I think, if the staff could identify are
2 there any impacts on them that would be useful.

3 And West Valley, New York is quite
4 interesting, because -- well, in any event, the request
5 is if you can clean up that question and if it wasn't
6 included in the regulatory analysis, include it in an
7 update of that regulatory analysis.

8 So, hopefully that question/comment is
9 succinct and I'll leave it with you.

10 MR. ESH: Right. And we understand the
11 comment. As Chris indicated, we're evaluating it. At
12 least in my personal opinion when we first developed
13 this, I don't think we intended to apply it to closed
14 or legacy sites, but it's a little bit more difficult
15 question to answer.

16 We have to look at the rule text as it
17 stands, see what it is indicating and then come forth
18 with the answer to that question.

19 So, we understand it is all I can say at
20 this time and I can give you my personal opinion, but
21 we're evaluating it.

22 FACILITATOR CAMERON: Okay. Thanks,
23 David. Thanks, John.

24 Susan, anybody else on the phone?

25 MR. GREEVES: -- before the comments are

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1 due. Thank you.

2 MR. ESH: I didn't --

3 FACILITATOR CAMERON: What was that,
4 John? Can you repeat what you just said?

5 MR. GREEVES: I said I would look forward
6 to hearing more about this before our comments are due.

7 FACILITATOR CAMERON: Oh.

8 MR. GREEVES: If there's any way to
9 project that, I would appreciate it.

10 MR. ESH: Right. Okay. I understand.

11 FACILITATOR CAMERON: Okay. Thank you.
12 I think the staff will take that under consideration
13 and see if they can --

14 MR. ESH: I mean, I think the best we can
15 say is if you have a specific concern if it were
16 interpreted a certain way, that you can make a comment
17 about your concern if it were interpreted that way.
18 Because I don't know if we're going to have that
19 information to you before the public comment period
20 ends.

21 FACILITATOR CAMERON: Susan, anybody else?

22 TELEPHONE OPERATOR: No other questions
23 at this time, sir.

24 FACILITATOR CAMERON: Okay. Thank you.

25 Let's go to the next topic.

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1 MR. ESH: Next topic is the performance
2 period analyses. So, it's the third tier of the
3 analysis timeframes. It's applicable to times after
4 the 10,000 years.

5 It only applies if you have sufficient
6 waste present. And we developed a table, Table A, to
7 provide the concentrations of what the waste would be.

8 They're basically the Class A waste
9 concentrations with the addition of not just
10 transuranic long-lived alpha-emitting radionuclides,
11 but all long-lived alpha-emitting radionuclides.

12 And one of the important parts is that the
13 concentrations are based on the disposal site average
14 using the sum of fractions approach. This was
15 discussed at some of the previous meetings.

16 I think I may have had a mistake on an
17 earlier slide where I used facility average. It's
18 disposal site average.

19 And the reason for that is, in my opinion,
20 Part 61 is backwards in how it defines facility and
21 site. At least I have them wired differently in my
22 head.

23 I wanted to correct it when we did the
24 proposed rule, but it shows up all over the place,
25 including all through the standard review plan and

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1 other documents.

2 It would have been a really big mess to
3 reverse those two words. And so, I was like, well,
4 we'll live with it and just need to make sure we explain
5 it clearly. And then I turned around and explained it
6 wrong in the earlier meeting anyway.

7 So, it's concentrations based on disposal
8 site average. That's the area where you're disposing
9 of the waste, including any backfill and buffer
10 materials, but not the buffer zone itself.

11 So, the facility has to have a buffer zone
12 around it to facilitate monitoring and some other
13 things. You don't include the buffer zone, but you
14 include all the other materials inside.

15 We wanted something simple and easy for a
16 licensee or an Agreement State regulator to calculate
17 and be able to decide does this apply to me or not.

18 One other point about this is that there
19 are some exceptions to that. And the guidance document
20 outlines some exceptions that might apply.

21 It's a little bit hard to take a
22 high-dimensional problem and reduce it to a single
23 dimension, which is what you're doing in this waste
24 classification table.

25 So, we wanted to make sure that people were

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1 smart about how they -- they didn't just look at the
2 table and say, okay, we're good. There are some other
3 considerations to think through at least, but they
4 should be rare. We tried to make this so that those
5 would be truly exceptions and not the rule.

6 So, the performance period analyses, if
7 you have to do it, is basically a transparency of
8 information to your stakeholders. You're going to
9 assess how your disposal site may limit the long-term
10 impacts.

11 There could be a lot of different types of
12 analyses you do for this. But as part of it, you should
13 identify what your design features and site
14 characteristics are that are you expect to limit your
15 long-term impacts. And then you would minimize those
16 impacts to the extent reasonably achievable.

17 There's no numerical goals associated with
18 the releases that may occur after the 10,000-year time
19 period.

20 Next slide, please. So, this is Table A
21 modified a little bit. We had a comment in our first
22 meeting about the use of subscripts on the right-hand
23 column.

24 So, like the long-lived alpha-emitting
25 radionuclides item -- or Superscript 3 was next to the

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1 10. So, they said, well, some people could look at that
2 as a thousand. And, you know, we didn't want people
3 to do that.

4 So, you know, we can't commit to what
5 changes we're going to make in the regulation. But if
6 I'm still there, we're going to make this change in the
7 regulation because I think that could be a source of
8 confusion as to what the values are. And we certainly
9 don't want that.

10 This is a table so that you see that the
11 long-lived alpha-emitting nuclides is not -- the
12 transuranic is removed. So, that would pull uranium
13 in there essentially for the disposal of large
14 quantities of depleted uranium.

15 Next slide, please. This is the text that
16 goes along with that. I wanted to have it in your slide
17 package so you could look at it and think about it. I'm
18 not going to read it.

19 Next slide, please. And this was a
20 question we had earlier about what are the long-lived
21 isotopes. So, we have a table, Table 7-1, in the
22 guidance document that provides a list of a variety of
23 isotopes. In some cases, parents and progeny, and then
24 whether we would expect them to be part of a low-level
25 waste PA inventory.

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1 Next slide, please. So, what we're
2 seeking feedback on is our overall approach to this
3 performance period analyses. Use of the Class A values
4 as the trigger for needing to do that long-term
5 analysis, you know, is that right? Should there be
6 something else? Something different?

7 The averaging approach to the
8 concentrations, we wanted something that was simple and
9 easily implementable, but made sense technically.

10 And then the requirements that it's kind
11 of a qualitative requirement that you're going to
12 minimize to the extent reasonably achievable and that
13 you're going to communicate what are all the features
14 that are allowing you to reduce those long-term
15 impacts.

16 FACILITATOR CAMERON: Okay. In the room,
17 Mik, did that table answer your question?

18 MR. SPEAKER: Yes, it did.

19 FACILITATOR CAMERON: Okay. Good.

20 MR. ESH: So, that table, you know, if you
21 have specific questions about isotopes that aren't on
22 that or you think should be on it, that would be the
23 good type of feedback to give us in this comment period
24 on the guidance document.

25 FACILITATOR CAMERON: Great. Anybody

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1 else in the room on this particular topic?

2 (No questions.)

3 FACILITATOR CAMERON: Susan, can you see
4 if anybody is on the phone that wants to comment?

5 TELEPHONE OPERATOR: Yes. Thank you.
6 Again, if you'd like to ask a question, please press
7 star one and record your name at the prompt.

8 (Pause.)

9 TELEPHONE OPERATOR: And I'm currently
10 showing no one at this time, sir.

11 FACILITATOR CAMERON: Thanks, Susan.
12 We're going to go on to the next topic.

13 MR. ESH: The next topic is the safety
14 case. And so, I have a few slides in here to start off
15 with, which is to communicate what the IAEA approach
16 to safety case is, and then to describe what NRC's
17 approach is in the 10 CFR Part 61 proposed rule.

18 So, the IAEA approach is very
19 comprehensive. It includes all the things that are
20 shown on the right-hand side of Slide 38.

21 It also includes some other information
22 that's not necessarily reflected in these boxes, or it
23 might be subsets of information within these boxes.
24 It's very comprehensive and very detailed.

25 The safety assessment is an important

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1 component of it, but it's just one of many components.
2 If you want further information, it's described in this
3 specific Safety Guide Number SSG-23. And that's
4 available on their website.

5 Next slide, please. So, the safety
6 assessment in IAEA's approach includes these
7 components on Slide 39. The management system, the
8 non-radiological environmental impacts. And then in
9 the center, the post-closure radiological impacts
10 including their scenarios, models and calculations, as
11 well as consideration of operational safety and site
12 and engineering.

13 From NRC's perspective, what we're
14 proposing for safety case, we think, is quite similar
15 to the IAEA approach, but not as comprehensive as the
16 previous slide on Slide 38.

17 So, they include things like stakeholder
18 interaction during the siting phase. And that sort of
19 information is not part of the part 61 process.

20 So, there are some differences. But
21 overall if you look at the substance of the two
22 approaches, we think what's being proposed in Part 61
23 is very similar to it.

24 Next slide, please. So, the safety case
25 in Part 61 has two main components; the technical

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1 analyses and then the defense-in-depth component such
2 as barriers and site ownership.

3 I'm here to explain how the combination of
4 defense-in-depth and performance assessment should be
5 used to support the licensing decision.

6 The definition for defense-in-depth is
7 provided here on the bottom of Slide 40. We looked at
8 this and discussed whether we needed a definition
9 specific to waste disposal, or whether we should use
10 the definition that the Agency has. And we couldn't
11 come up with a good reason to and we thought it might
12 introduce confusion to have a different definition for
13 defense-in-depth for waste disposal compared to what
14 NRC uses in other programs.

15 So, the definition is provided here. It's
16 the use of multiple, independent and redundant layers
17 of defense so that no single layer, no matter how
18 robust, is exclusively relied upon for safety.

19 Now, we had a question at one of the earlier
20 meetings. Does that mean, for instance, I would need
21 two leachate detection systems if my system had a
22 leachate detection system?

23 The answer to that is, no. In low-level
24 waste disposal it's not redundancy of necessarily
25 specific layers, but it's redundancy of your system.

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1 So, that may be that you show how the
2 natural components of your system and the engineered
3 components of your system combine to achieve this
4 defense-in-depth protection. It's not a matter of you
5 need redundancy of each layer specifically.

6 So, in an active safety system maybe you
7 have a pump and a backup pump. That's not how this is
8 being applied in a waste disposal system.

9 Next slide, please. The safety case is
10 defined here. And it's defined a little bit more
11 broadly. It's the collection of information that
12 demonstrates the assessment of the safety of a waste
13 disposal facility.

14 This includes technical analyses such as
15 the performance assessment and trigger assessment, but
16 also includes information on defense-in-depth and
17 supporting evidence and reasoning on the strength and
18 reliability of the technical analyses and the
19 assumptions made therein. So, it's a combination of
20 all the information.

21 We believe that the existing low-level
22 waste disposal facilities in their licensing process
23 are essentially doing the safety case. This just
24 formalizes it in the regulation.

25 There are a few parts where you have to

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1 describe the safety case now. So, but if you look at
2 existing licensing basis, that licensing basis is
3 essentially a safety case. So, we don't see this as
4 a high burden.

5 The defense-in-depth part could be for
6 some. If they don't have a redundant -- lot of
7 redundancy or resiliency in their system with the
8 engineered and the natural components, that may be a
9 difficult analyses to perform and to demonstrate
10 depending on the type of waste you have, you know.

11 Short-lived waste, it's going to be a whole
12 lot easier than if you have a lot of long-lived waste
13 to make those arguments.

14 Next slide, please. So, what we're
15 seeking feedback on are our definitions for the safety
16 case and defense-in-depth.

17 There's concepts regarding these added to
18 61.7. I should have mentioned that earlier. 61.7 in
19 the regulation is the Concept section. That kind of
20 says what we're talking about and how things fit
21 together, but they aren't requirements, per se. The
22 requirements are found in the sections that follow, but
23 the concepts do provide kind of the framework for how
24 all the requirements that you read later are supposed
25 to fit together and how they work and the basis for them.

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1 There are new technical analysis
2 requirements for defense-in-depth provided in 61.13.
3 But as you look at it, it's very high level. It doesn't
4 say do anything specific, you know, do Analysis A, B
5 and C for defense-in-depth. It basically says,
6 provide defense-in-depth analyses. So, it's very
7 generic as to the requirement. That could be
8 interpreted a lot of different ways.

9 There is a requirement to update the
10 defense-in-depth at closure after you've got all that
11 information from your operating period through your
12 closure period.

13 I think that's it. Next slide, please.
14 Yeah.

15 FACILITATOR CAMERON: Okay. Susan,
16 anybody on the phone on this subject, safety
17 case/defense-in-depth?

18 TELEPHONE OPERATOR: Okay. And if you'd
19 like to ask a question, please press star one and record
20 your name at the prompt.

21 (Pause.)

22 FACILITATOR CAMERON: Anybody in the
23 room, Richland? Anybody on this?

24 (No questions.)

25 FACILITATOR CAMERON: And no one on the

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1 phone, correct, Susan?

2 TELEPHONE OPERATOR: That is correct,
3 sir.

4 FACILITATOR CAMERON: Okay. Let's go to
5 waste acceptance criteria.

6 MR. ESH: All right. Waste acceptance
7 criteria are -- there's new requirements here for
8 developing waste acceptance criteria, WAC, using
9 either -- so, now you have an "or" approach. The 61.55
10 waste classification system, or a site-specific waste
11 acceptance criteria.

12 So, the site-specific waste acceptance
13 criteria would be based on your site-specific analysis
14 as we talked about previously.

15 So, this is found in 61.58 of the
16 regulation was the place we came up with to house this.
17 And it focuses on three areas; the waste acceptance
18 criteria, waste characterization and waste
19 certification.

20 Next slide, please. So, this is one area
21 where we did put the description in the slides and I'm
22 going to read it here.

23 "Waste acceptance. Demonstrating
24 compliance with the performance objectives also
25 requires a determination of criteria for the acceptance

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1 of waste."

2 The Department of Energy does this and I
3 think many of the commercial operating sites have some
4 waste acceptance criteria process and criteria.

5 The criteria can be determined from the
6 results of the technical analysis that demonstrate
7 compliance with the performance objectives for any land
8 disposal facility or, for a near-surface disposal
9 facility, the waste classification requirements of
10 Subpart D of this part.

11 So, as I indicated, you can use the waste
12 classification tables, or your site-specific analysis
13 to define waste acceptance criteria.

14 That's not the only part of your waste
15 acceptance criteria. There's a lot more that goes into
16 that, you know. 10 CFR Part 61, 61.56 has waste
17 characteristics that some are prohibiting or some that
18 waste can or can't have. So, there's more to waste
19 acceptance than just the concentration of the
20 radionuclides.

21 And probably those other things are more
22 important, as we learned from WIPP not too long ago,
23 the waste isolation pilot plant.

24 Next slide, please. So, we're seeking
25 feedback on the concepts regarding waste acceptance.

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1 So, this is an area -- because we added something, this
2 "or" approach, we have changes to the Concept section
3 describing it. And then as I indicated, the specific
4 requirements for waste acceptance.

5 And this is one where you might want to take
6 some time and look at it in detail and hopefully give
7 us some comments on it, because licensees and Agreement
8 State regulators are on the front lines with accepting
9 the material and NRC does not have any currently
10 operating sites that we regulate.

11 So, things that we might think okay or
12 language that we put in this area might not be okay from
13 your perspective. And that's an area where we want to
14 get your feedback.

15 Next slide, please. Okay.

16 FACILITATOR CAMERON: All right.
17 Anybody on concepts and requirements on waste
18 acceptance here in Richland?

19 (No questions.)

20 FACILITATOR CAMERON: All right. Susan,
21 anybody on the phone on waste acceptance?

22 TELEPHONE OPERATOR: Currently at this
23 time there is none.

24 FACILITATOR CAMERON: All right. As
25 David indicated earlier, the other category is time to

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1 raise any issues that you want to with the proposed
2 rule.

3 Anybody have some comment now? Good.

4 MR. NOLAN: Mike Nolan, Energy Northwest.
5 I'm probably the only waste generator in this room.
6 And Energy Northwest is a bit unique because depending
7 on the year, we bear the brunt of, oh, 60 to 80 percent
8 of the cost of disposal at the waste site primarily
9 because we generate that much waste as compared to
10 everybody else.

11 Has anybody done any cost analysis to see
12 what implementation of these regulations might cost?
13 And I ask that primarily because it trickles down and
14 we will bear the brunt of a major part of it.

15 MR. ESH: Right. And there is a
16 regulatory analysis which basically looked at what NRC
17 felt were the costs of implementing this regulation.

18 And as you indicate, they will trickle down
19 to all the ratepayers. So, it is something that
20 everybody should consider and evaluate whether that
21 analysis, I guess, was appropriate or appropriately
22 considered the costs and expenses that it would
23 generate.

24 FACILITATOR CAMERON: And, Steve, correct
25 me on this if I'm wrong, but if you follow clicking

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1 through the website tabs, if you get to that last tab,
2 one of the pieces of information there should be the
3 regulatory analysis.

4 And so, as the NRC explained at the
5 Columba, South Carolina meeting, the regulatory
6 analysis is fair game for comment also.

7 MR. ESH: Right. And the one thing --

8 FACILITATOR CAMERON: And there it is.
9 Thanks, Steve.

10 MR. ESH: One thing I wanted to indicate,
11 though, is when you look at this you have to consider
12 not the totality of what is being proposed, but you have
13 to look at the delta between what you have to do now
14 under Part 61 and what's being proposed under the new
15 Part 61. It's the delta between the two and the costs
16 associated with that.

17 So, you know, what I would say is that right
18 now everybody has to do a performance assessment.
19 There's a few requirements under 61.13 that have been
20 added, but those requirements should be part of any
21 modern performance assessment, you know.

22 They should be doing something to define
23 the scope, they should evaluate uncertainty, and they
24 should have something regarding why they think their
25 calculations or models are good. Those should all be

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1 part of a modern performance assessment. So, look at
2 it in that light.

3 There definitely are some new things,
4 though, you know. The requirement for the
5 defense-in-depth protections even if you want to make
6 the argument that existing facilities have
7 defense-in-depth, the fact that that requirement is now
8 added means that somebody is going to have to write
9 something up about it in a document, at least. Maybe
10 somebody is going to do some analyses depending on the
11 approach taken by a licensee, but there's going to be
12 something associated with things like that that, you're
13 right, would be new and would have a cost associated
14 with them.

15 FACILITATOR CAMERON: Okay. Thank you
16 for that. And thanks, Steve, for putting it up.

17 Anybody else on any topic at this point,
18 in the room?

19 (No questions.)

20 FACILITATOR CAMERON: Okay. Let's see.
21 Susan, can you see if anybody on the phone has anything
22 else they want to raise with us?

23 TELEPHONE OPERATOR: Certainly. I'll be
24 happy to check. Again, one last time if you'd like to
25 ask a question, please press star one and record your

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1 name at the prompt.

2 (Pause.)

3 TELEPHONE OPERATOR: And currently there
4 is no one waiting. So, we're just seeing if the last
5 check --

6 FACILITATOR CAMERON: Okay. Now, we're
7 going to go to the guidance document.

8 MR. ESH: Right. So, this is just one
9 slide we have on the guidance document just to give you
10 a little bit of information about it.

11 As Steve indicated, it's available for
12 comment. It has a different docket number associated
13 with it, but it was important that we try to get feedback
14 on it.

15 We know that's asking a lot of people --
16 it's a big document. It's 434 pages with 18 pages of
17 references. So, you're looking at 450 pages. And if
18 I have my math right, you have like 45 days left. So,
19 now you're at ten pages per day you have to read.

20 Earlier when we started, people were at
21 maybe five pages per day. So, it's getting a little
22 bit more burdensome the longer you wait. And don't
23 wait until the last day.

24 It has a lot of examples, tables and
25 figures in it. Of course guidance is not regulations.

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1 The regulations stand on their own, but the guidance
2 provides information for how NRC staff would review
3 some of these things and to help our Agreement State
4 regulators perform their review.

5 So, we would hope that the Agreement State
6 regulators that might consider this document would be
7 a key source of information for us in terms of comments.

8 It has a glossary. And as I indicated
9 earlier, it has a variety of -- well, it has appendices
10 on hazard maps. It has other appendices, too.
11 Appendices on features, events and processes.

12 There's examples in there for stability
13 analysis. So, we've had a lot of questions about site
14 stability.

15 There's a detailed example on like a
16 model-based approach to site stability. And there's
17 a detailed example on a design-based approach to site
18 stability using a modified version of the approach for
19 disposal of uranium mill tailings.

20 The ML number I hope is correct as provided
21 there on the slide. And Steve provided the information
22 earlier in the slide package.

23 FACILITATOR CAMERON: Questions on the
24 homework assignment?

25 (No questions.)

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1 FACILITATOR CAMERON: Okay. Susan, can
2 you see if anybody has a question or comment about the
3 guidance document?

4 TELEPHONE OPERATOR: Okay. Currently
5 I'm showing there is nobody with a question. But,
6 again, if you would like to ask a question, please press
7 star one and record your name at the prompt.

8 (No questions.)

9 FACILITATOR CAMERON: Okay. Great.
10 We're going to go to our senior NRC official, Chris
11 McKenney, to wrap things up for us.

12 MR. MCKENNEY: Well, thank you for
13 everybody for coming to this meeting today. We've
14 heard a number of things. We wanted to get out to make
15 sure that you had an opportunity to ask any clarifying
16 questions and make any comments you had at this point.

17 Of course that doesn't forbid you from
18 making comments later. And we appreciate any
19 comments, including details on rationale and a possible
20 option, what you view is a different way to go if you
21 make a comment about something needs to be changed in
22 the regulation.

23 We have heard comments today on
24 compatibility with the States and how the strict
25 compatibility may have some impacts on timeframes of

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1 either where that -- either from other laws, or just
2 situations in the State.

3 Questions were raised about what the
4 applicability of this rule was to closed facilities
5 either if they were never Part 61 facilities, or the
6 closed facility in Nevada.

7 There were statements made about
8 government-to-government meetings to tribals, to
9 tribal members who are affected. And also about the
10 need for a supplemental environmental impact
11 statement.

12 There was very good comments on how going
13 to a performance assessment and site-specific analyses
14 is an information burden on the public and that the
15 availability of the information, and the notice of
16 availability and the ability to be involved in these
17 license amendments and stuff is of interest.

18 And we also heard quite a bit on DAT about
19 issues about the dose limits and the use of ICRP-style
20 dosimetry rather than using risk and the National
21 Academy evaluations of radiation risk in BEIR VII.

22 And but today is our second to last public
23 meeting. We will be having a public meeting in Salt
24 Lake City tomorrow. And it will also be -- have a
25 webinar session if people want to attend that again.

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1 And with that, thank you.

2 FACILITATOR CAMERON: Thank you all.

3 (Whereupon, at 8:25 o'clock p.m., the
4 public meeting in the above-entitled matter was
5 concluded.)

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