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NUCLEAR REGULATORY COMMISSION

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Disposal Rulemaking and Strategic
Assessment of Low-Level Radioactive Waste
Regulatory Program Public Meeting

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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PUBLIC WORKSHOP

+ + + + +
THE STATUS OF LOW-LEVEL RADIOACTIVE WASTE DISPOSAL
RULEMAKING AND STRATEGIC ASSESSMENT OF LOW-LEVEL
RADIOACTIVE WASTE REGULATORY PROGRAM

FRIDAY, MARCH 7, 2014

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RENAISSANCE PHOENIX DOWNTOWN HOTEL
50 EAST ADAMS STREET, SALONS 7 & 8
PHOENIX, AZ 85004

+ + + + +
The Public Workshop convened at 8:11 a.m.,
Chip Cameron, Facilitator, presiding.

NRC STAFF PRESENT:

CHIP CAMERON, Facilitator
LARRY W. CAMPER
DAVID ESH
CHRISTEPHER MCKENNEY
ABY MOHSENI
TARSHA A. MOON
GREGORY SUBER

1 MELANIE WONG

2 MARIAN ZOBLER

3 PANEL MEMBERS:

4 RALPH ANDERSON, Nuclear Energy Institute

5 BRAD BROUSSARD, Texas Commission on
6 Environmental Quality

7 WILLIAM DORNSIFE, Waste Control Specialists

8 EARL FORDHAM, Washington Department of Health

9 MICHAEL GARNER, Northwest Interstate Compact
10 on Low-Level Radioactive Waste Management

11 CHRISTINE GELLES, U.S. Department of Energy

12 RUSTY LUNDBERG, Utah Department of
13 Environmental Quality

14 DAN SHRUM, EnergySolutions

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

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

(8:11 a.m.)

MR. CAMERON: Good morning everyone.

(Multiple Good mornings)

MR. CAMERON: My name's Chip Cameron and welcome to the Public Workshop today and the topics that we're going to address in the Workshop today, there's two topics, and the first is going to be the status of the NRC Rulemaking on Low-Level Radioactive Waste Disposal.

And the second topic is going to be the NRC's Strategic Assessment Planning for Addressing Low-Level Waste Disposal issues and it's my pleasure to serve as your facilitator this morning.

And what I want to do is just take a couple minutes to go through meeting format so that you understand what's going to happen today. Basically there's two parts to today's Workshop and the first part is going to be the status of the NRC Rulemaking and we have Dave Esh from the NRC staff to talk to us about that.

And the second part of the meeting that's going to start about 9:45 is going to be a panel discussion where we have experts from around the Country who are going to be up here at the tables and we're going to have a dialogue on strategic assessment, low-level

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1 waste strategic assessment issues.

2 Now the people on the panel are not the only
3 experts on this subject. There's many of you in the
4 room. We also have people that are on the phones and
5 we have people who are going to be listening to this on
6 the internet.

7 After Dave's presentation we're going to go
8 out to those of you in the audience for comments,
9 questions, observations, and after the panel discussion
10 we're going to do the same thing. We're going to go out
11 to the people who are with us here and who are with us
12 virtually on the phones and the internet.

13 I just want to emphasize one thing about the
14 public comment part of the meeting in terms of the first
15 segment on the status of the Rulemaking that Dave Esh
16 is going to talk about, is that the NRC is here to inform
17 you about the status of the Rulemaking and they're also
18 here to listen to any comments, any observations you
19 have and answer any questions you have.

20 But it's not a formal comment session with
21 all of you on the status of the Rulemaking and I just
22 want to emphasize that if you do want to have whatever
23 you say registered as a formal comment on the Rulemaking
24 that there will be a time to do that after the proposed
25 rule goes out.

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1 So there's no limit on what anybody can say,
2 but I just want to tell you the NRC's going to be
3 listening but it won't be a formal comment. The second
4 part of the meeting, the panel discussion though, is the
5 NRC not only wants to hear from the panelists and have
6 the panelists react to what each other says, but they
7 also want to hear from the public, the audience here,
8 phones, internet, on these strategic assessment issues.

9 And they will be considering those
10 particular comments on that segment. So we're going to
11 get started with Larry Camper, who all of you know, he's
12 the Division Director, Division of Waste Management and
13 Environmental Protection at the NRC.

14 He's going to give you a formal welcome.
15 We'll have a few minutes after Larry's done for some
16 high-level process questions that anybody might have.
17 Then we'll go to Dave Esh. Dave will give us the status,
18 we'll go back out to you.

19 Hopefully we'll be able to break at 9:30,
20 take about a 15-minute break, we'll have our panelists
21 come up, and then we'll kick that off and I'll have some
22 more to say about that at the time.

23 Note that we have Deborah Gonzalez with us
24 who is a stenographer. There is a transcript being kept
25 of the meeting and that will be your record and the NRC's

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1 record of what transpires here today.

2 We have a 1:00 end time that we have to be
3 pretty strict about because a lot of people have planes,
4 so we will be stopping at 1:00. And I should note in
5 that regard, after the panel discussion and we hear from
6 the public on the strategic assessment issues, we have
7 Aby Mohseni from the NRC who's going to do a recap for
8 us before we break at 1:00.

9 So, with that, thank you all for being here
10 and let's go to Larry for a welcome.

11 MR. CAMPER: Good morning.

12 (Multiple good mornings)

13 MR. CAMPER: Morning. Thanks for being
14 here. It's been a long week. I know most of you have
15 been at the Waste Symposia Conference all week and we
16 appreciate you staying around to take part in our public
17 meeting.

18 This is the third or fourth year that we've
19 had a public meeting to follow the WM Symposia. We
20 think it was a good opportunity for interaction with
21 people in the industry who are key players. It's a real
22 opportunity for you to help us and for us to share
23 information with you and, of course, with the public
24 that wants to attend or listen in as well.

25 So it's a real opportunity. As Chip said

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1 we have two purposes for today's gathering. One is Dr.
2 Esh, who's on the working group for the Rulemaking on
3 the site-specific assessment for Part 61, will share
4 with you current Commission direction.

5 As Chip said there will be an opportunity
6 for formal comments, but, again, we welcome your
7 observations and thoughts at this point in time as well.
8 And then later Melanie Wong, who's here helping us with
9 the IT stuff, will lead you in our discussion of the
10 Low-Level Waste Strategic Assessment.

11 And for those of you who might not know just
12 what that terminology means, let me just give you a brief
13 explanation. Back in 2007, it became very clear to me
14 as the Division Director that the Low-Level Waste
15 Program, which is in a maintenance mode in terms of
16 resources based upon Commission decisions in the past,
17 was dealing with a tremendous amount of policy issues.

18 And so we undertook this assessment, and
19 Melanie will go through this in some detail, so we
20 undertook this assessment to try to look at all the
21 things that were on the plate and we identified seven
22 high-priority items and we've been working on those
23 since that time.

24 Well fast forward to now and what we're
25 trying to do in keeping with our Agency's outreach

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1 efforts and trying to be more attentive to and aware of
2 stakeholders concerns, we thought we would involve you
3 within our current effort to update the strategic
4 assessment.

5 And so Melanie will step you through that
6 and from that we'll take back information and factor
7 that into looking ahead at what's coming down the road
8 in this part of our industry and what should we as a
9 regulatory body then be focusing upon.

10 So I want to thank our panelists that will
11 come up later and take part. Let me just mention their
12 names, Brad Broussard, who's with the Texas Commission
13 on Environmental Quality, Earl Fordham, from the
14 Washington Department of Health, Rusty Lundberg, the
15 Utah Department of Environmental Quality, Ralph
16 Anderson, with the Nuclear Energy Institute, Bill
17 Dornsife, Waste Control Specialist, Dan Shrum,
18 EnergySolutions, Christine Gelles, with the Department
19 of Energy, Michael Garner, with the Northwest
20 Interstate Compact on Low-Level Radioactive Waste
21 Management/State of Washington, and Greg Suber, with
22 the NRC, who's our Branch Chief for the Low-Level Waste
23 Program.

24 So on my behalf I want to thank all those
25 panelists for taking part today, it's quite an August

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1 (phonetic) group, and I think the discussion should be
2 very interesting as you share your views with us about
3 looking ahead in terms of our strategic assessment and
4 focusing of our efforts, and, of course, all of your
5 input. Thank you for that in advance.

6 I also want to thank Tarsha Moon. Tarsha
7 is sitting outside. Tarsha is a Licensing Assistant in
8 our Division and she did all of the ground work of
9 putting all this together and all the packages and
10 everything you see. So much goes into one of these
11 meetings that you just never see, so Tarsha's done a
12 fantastic job and I thank her.

13 The panel, of course, I thank you. I want
14 to thank you for being here, like you said, I know it's
15 been a long week and your being here forwards us the
16 opportunity to get that valuable input, so we thank you
17 for that.

18 And, of course, our Facilitator
19 extraordinaire, Chip Cameron, I think all of you know
20 Chip, he's done a lot of facilitation for us over the
21 years and, of course, he's NRC alumni, and we thank you,
22 Chip, for doing that.

23 Our Reporter, we thank you for recording
24 everything. And, again, let's have a good discussion
25 today and we value your input. Thanks for being here.

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1 MR. CAMERON: And, Larry, did you want to
2 take any high-level types of questions or should we just
3 go on to David? Does anybody have a question for Larry
4 at this point about the process or the meeting?

5 Okay. And I think we'll go to the phones
6 and the internet later after Dave Esh is done, so let's
7 bring Dave up at this point.

8 DR. ESH: Thanks, Chip. As Larry said
9 we're grateful that you're here to listen today and we
10 appreciate your interest in this Rulemaking effort and
11 strategic assessment.

12 I hope you all got a chance to enjoy the
13 delicious breakfast of water supplied by the NRC this
14 morning.

15 (Laughter)

16 DR. ESH: I want to also acknowledge the
17 Rulemaking team in this. This is not a small effort,
18 there's a lot of people involved. I just happened to
19 draw the short straw to be here today and talk to you
20 about it. Next slide, please, Melanie.

21 I'm going to give you a little bit of
22 background, a lot of this should be familiar to many of
23 you, but not all of you. We were hoping to get some
24 people here today that had later travel plans leaving
25 the Waste Management Conference, and so I'll give you

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1 a bit of background so you understand what this is all
2 about.

3 In 2009 we received some Commission
4 direction under the Staff Requirements Memorandum for
5 SECY-08-0147 and that had two tasks in it. The first
6 task being what we're talking about today. To perform
7 a Rulemaking to specify requirements for site-specific
8 analysis and the technical parameters to support such
9 analysis and to develop a Guidance Document.

10 So that's the limited scope, site-specific
11 Rulemaking that we're doing now and talking about in the
12 first part of this meeting. There is a second part to
13 that which is in a future budget request to basically
14 re-look at the waste classification system and classify
15 depleted uranium.

16 That future effort could have a lot of
17 options to it and it may not even be necessary, depending
18 what's done in this Rulemaking effort that we're working
19 on right now. Next slide, please, Melanie.

20 So then in 2012 we received further
21 Commission direction in SRM-COMWMD-11, with all the
22 numbers there, and it had a number of pieces to it. That
23 was kind of before we got to issue a draft proposed
24 regulation.

25 We got some more direction from the

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1 Commission and you can read the points that I have up
2 there. The first one was some flexibility to use the
3 current ICRP dose methodologies, and that's something
4 that we have been doing for a while at NRC in analogous
5 programs, such as when we performed reviews for waste
6 incidental to reprocessing under the Department of
7 Energy.

8 So that wasn't a big deal to us, but it was
9 something to kind of modernize the regulation because
10 the original regulation was developed in the early
11 1980's and things have changed since then.

12 So if there are easy things that we can do
13 to modernize the regulation we like to do those, too,
14 within the scope of some effort. As many of you know
15 this has been ongoing for a while now, I think, in my
16 opinion, much too long, but the effort involved to do
17 a Rulemaking is considerable.

18 There are lots of things that go on behind
19 the scenes and a lot of effort to go on even to change,
20 you know, a few sentences in a regulatory requirement
21 can take quite some effort, so understand that whenever
22 you view the, put the schedule in context.

23 The second part of their direction was to
24 use a 2-tiered period of performance with the first tier
25 being a compliance period covering the reasonably

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1 foreseeable future, which was not defined, and then a
2 second tier, a longer period to look at site
3 characteristics and peak dose to a designated receptor
4 that is not *a priori*.

5 The period of performance, or the analysis
6 timeframe, seems to be a hot button issue. It wasn't
7 something that was required in this Rulemaking. There
8 was really only one thing that we had to do in this
9 Rulemaking and that was to provide a requirement to do
10 an intruder analysis for 61.42.

11 And Part 61, for those of you that may not
12 be that familiar with the regulation, there's four
13 performance objectives. 61.41, Protection of a Member
14 of the Public, that's kind of interpreted as an offsite
15 member of the public.

16 61.42, also Protection of the Public, but
17 it's more an onsite member of the public, called an
18 inadvertent intruder. 61.43, Protection of the Public
19 During Operations, which includes workers, and then
20 61.44, which is related to site stability.

21 61.42, as it was developed in the original
22 regulation, NRC developed waste classification tables
23 under 61.55. Those waste classification tables
24 basically represent NRC did a generic analysis of
25 intruders and did a, what we call an inverse calculation

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1 to develop the concentrations that would afford
2 protection to inadvertent intruders.

3 So if you have a waste stream that's
4 different than what was analyzed back during
5 development of the regulations and you use the tables
6 to ensure that somebody is meeting 61.42 they may not
7 meet the implicit intent of their requirements for
8 protection of the intruders.

9 So that was the only thing that we had to
10 do in this Rulemaking effort was to ensure that we had
11 an analysis requirement for 61.42. We looked at other
12 options, too.

13 So we said, well we could revise the waste
14 classification tables and add in all the isotopes or the
15 isotopes that were missing and there were some other
16 alternatives proposed to the Commission, but the
17 Commission ultimately said, no, go ahead and handle it
18 with analyses because that'll afford the most
19 flexibility.

20 We always talk about being risk informed,
21 that'll allow people to reflect their actual conditions
22 of their site and the disposal environment and other
23 things that are designed in developing what the
24 classification limits are appropriate for their site.

25 So that's the approach that we took. This

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1 second part here about the period of performance, like
2 I said, that wasn't necessary, but we did see that a lot
3 of different values were used in the Agreement State
4 analyses and NRC doesn't have any of these disposal
5 facilities ourselves, they're all in Agreement States.

6 So we thought well if there's a way that we
7 can kind of ensure some consistency there and propose
8 something that was consistent with guidance that NRC
9 issued in 2000 under NUREG 1573, well then we would try
10 to go ahead and do that in this Rulemaking.

11 The third element here was flexibility to
12 establish site-specific waste acceptance criteria, I
13 kind of talked about that. That's related to using
14 site-specific analysis to provide intruder protection
15 under 61.42.

16 And then the last part was to balance
17 Federal and State alignment and flexibility. So in
18 this direction in 2012, you might notice there's at
19 least three references to flexibility. That was one of
20 the things that were focused on then. Next slide,
21 please, Melanie.

22 So then on -- We just received recent
23 direction under SRM SECY-13-0075 and that has some
24 different requirements for the staff to follow. One,
25 a 3-tiered period of analysis with the first tier the

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1 compliance period of 1000 years using a 25 millirem dose
2 limit for 61.41 and a 500 millirem dose limit for 61.42.

3 And then a second tier that is termed the
4 protective assurance analysis period from 1000 years to
5 10,000 years where you would be using a 500 millirem
6 analytical threshold, and there's goal in parentheses
7 there, for both 61.41 and 61.42.

8 And then a third tier of performance period
9 for the timeframe greater than 10,000 years and that
10 would involve a qualitative analyses. Now we use the
11 term qualitative analyses, but it's really qualitative
12 interpretation of something that's probably going to be
13 quantitative, so it might be some form of quantitative
14 information that you interpret qualitatively, but a
15 qualitative analyses is kind of a funny thing if you ask
16 me.

17 So anyway that's what they have for the
18 period of analyses and then there are other features
19 associated with their direction. The second one down
20 here, the constancy of features, events, and processes
21 of the natural environment for Tier 2, unless compelling
22 scientific evidence is available.

23 Lots of these as Chip said in his
24 introduction and maybe Larry alluded to, this is pretty
25 recent direction and we're working on it right now. As

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1 part of the Rulemaking team one of my tasks is to write
2 rule language, so I've done a first draft of changes to
3 the Rulemaking language, but that's about it.

4 There's a lot of pieces that go into this,
5 you have the Statement of Considerations, you have the
6 rule language, we have a Guidance Document, which I'll
7 mention on the next slide, all of those things get put
8 together as regulatory analyses.

9 All of that gets put together in the
10 Rulemaking effort and that's all materials that you get
11 to see once it's proposed and you can provide us comments
12 on. We do want to be responsive.

13 It's tough for us to do that right now
14 today, but if we make you aware of all of this
15 information and, especially, if you felt like you've
16 made comments in the past and boy, the NRC's really not
17 listening to me, if you make those comments when we
18 eventually get a proposed rule out you will get a
19 response to them. That's the way our process works.

20 So if you have something and you felt like
21 we weren't responsive to, give it to us then and you'll
22 be assured of getting a response to it. The constancy
23 of features and events of the natural environment for
24 Tier 2, that may create some difficulty depending how
25 it's interpreted, so we'll have to be careful in that

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1 area.

2 Then the last one on this slide, the
3 realistic intruder scenarios of expected activities on
4 and around the disposal site at the time of closure, I
5 believe that implies a projection of realism at the time
6 of closure, which is going to be 100 years after
7 operation.

8 So you're trying to project something
9 realistically at least maybe 130 years into the future,
10 that may be a little tricky. So we'll look at that one
11 carefully, too, and see what's the right way to go about
12 it. Next slide, please, Melanie.

13 So continuing on with the Commission
14 direction, the first bullet, or tick, on the top of this
15 page is likely to be an area of keen interest to a number
16 of participants.

17 Basically the Commission wanted a
18 compatibility criteria, or a compatibility category of
19 "B" applied to the most significant provisions of the
20 rule and that would be to ensure consistency across all
21 of the Agreement State programs. That seems to be
22 swinging a little bit in the opposite direction from the
23 flexibility that was stressed in 2012.

24 And they also, though, are sensitive to how
25 people might, or the input that people might want to

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1 provide on this and they specifically asked for this to
2 be posed as a question in the Statement of
3 Considerations for all of you to provide feedback about
4 this approach.

5 The second tick here, the protective
6 assurance analysis period, requires the applicant to
7 propose remedial changes, so on and so forth.
8 Conceptually that process is the same as really what
9 occurs now in low-level waste facilities.

10 The only difference is the way we're
11 looking at it is that it would now require all sites to
12 kind of use information up to that 10,000 year timeframe
13 whenever they're proposing their site design and
14 inventory limits and such, whereas right now it's not
15 necessary that's included.

16 The third tick, stress defense in depth in
17 a safety case. The defense in depth, and our view on
18 that is basically that the low-level waste regulations
19 afford defense in depth through all of the things that
20 are required.

21 You have to do the siting requirements,
22 there's waste characteristics, there's the technical
23 analyses, there's the engineered design that goes into
24 it, it's not one component that you use to rely on safety
25 and protecting public health and the environment, but

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1 in this proposed, or in the direction from the
2 Commission it's, we believe it's pretty clear they want
3 this defense in depth and the safety case reflected in
4 the regulatory requirements.

5 So the defense in depth would now become an
6 explicit requirement in low-level waste disposal and
7 that could be difficult to demonstrate for some sites
8 or for some types of waste.

9 The last one, I'm one of the primary authors
10 of the Guidance Document, the draft that we had prior
11 to this direction, I think it was maybe 394 pages,
12 something like that. It will likely be larger than that
13 now with the new information and requirements that we
14 have here.

15 And we do greatly value feedback on that.
16 We recognize it's a challenge, especially for a large
17 document like that for you to spend your time to look
18 at it. To the extent that you can, we really value that
19 feedback.

20 We don't have many ways that we can
21 incentivize people to provide us feedback on that
22 besides let you know about it, let you know about the
23 key information in it, and have some interactions to
24 possibly talk about it. So, next slide, Melanie.

25 Path forward then is we will revise the

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1 rule, the Rulemaking language, the Statement of
2 Considerations, the Guidance Document, the Regulatory
3 Analysis, all of that over the next year.

4 We have probably, I'd say half a year or
5 less to actually do the work and then there's probably
6 equally about that amount of time to go through the
7 approval and concurrence process. So we're going to be
8 very busy over the next half a year or less, the staff
9 will, to implement all of these changes.

10 And then what that will result in is,
11 hopefully, a proposed rule issue for public comment in
12 2015. And, like I said, that's when you really want to
13 make sure you get your comments in and you will get a
14 response to everything that you ask us.

15 The extensive stakeholder outreach will be
16 performed over this time. You'll have 120 days to
17 comment on all of the materials and we'll have one or
18 more public meetings to engage our stakeholders.
19 Thanks, Chip.

20 MR. CAMERON: Okay, great. Thank you,
21 Dave. And we're going to go out to all of you for
22 observations, questions on what Dave had presented and
23 we're going to try as I said before to break at 9:30 and
24 I'm sure that a lot of the discussion here and what Dave
25 said is going to be grist for the mill for the panel

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1 discussion also and we may have time to revisit all of
2 this after the panel discussion.

3 But there's some people in the audience who
4 signed up to say something, so I'm going to go to these
5 people and see if they want to say anything now and then
6 we'll test our phone system out and then we'll come back
7 to anybody else who might want to say anything that's
8 here in the audience.

9 And, Lisa, do you want to say some stuff?
10 Go ahead. Please introduce yourself, first name, last
11 name, so that --

12 MS. EDWARDS: Yes. Lisa Edwards with
13 EPRI. Dave, on the previous slide you had the thorough
14 review of guidance by the low-level waste community and
15 I know that's a very large document, is there any chance
16 that a draft of that can be put out early before it's
17 in its final form so people can start digesting it?

18 DR. ESH: Yes, I think the answer is I wish
19 we could. The problem is that the guidance is
20 intimately tied to the regulatory language. So until
21 the regulatory language is in a firm state it would be
22 premature to get the guidance out.

23 A lot of it is maybe some technical
24 information that isn't necessarily part of -- When we
25 do a guidance effort we won't just limit it to the, say

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1 the changes in the rule language, but if we've developed
2 guidance or worked on things pertinent to low-level
3 waste that we think we can put in all one document that
4 would help people perform their reviews we'll put that
5 in there, too.

6 So, you know, there will be sections in
7 there on uncertainty and things like that. Some of
8 those things are added to the regulation, or will be
9 added to the regulation explicitly in the new
10 requirements, and some of them won't be.

11 So, you know, you could, that might help
12 with the review that you could focus on those areas that
13 you think are kind of less technical, or more directly
14 related to the rule changes and less technical
15 information that may be just something we added to be
16 more complete.

17 MR. CAMERON: Okay, thank you. Thank you,
18 Lisa. Let's go to Tom Magette. Tom?

19 MR. MAGETTE: Thank you. Tom Magette,
20 PricewaterhouseCoopers. Thanks for the update, David.
21 I would just like to say that I really appreciate the
22 process that we've gone through and we've had a lot of
23 opportunities to read a lot of different versions of the
24 rule, some of which I didn't really think were ready to
25 be published as a proposed rule.

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1 And while I may not agree with every word
2 that I would expect to see in this one I think it is ready
3 to be a proposed rule and I'm really anxious to see it
4 published as a proposed rule, you know, without any more
5 interim stops.

6 I know you guys have a lot to do. I get the
7 whole thing with the regulatory basis and the technical
8 basis and you have to update for the different time
9 periods, but it would be really cool to see something
10 this year.

11 I know you guys are working as hard as you
12 can, but I just want to say that I think this is ready
13 for publication. This concept, it's not necessarily
14 the wording, and, you know, my comment is please publish
15 it. Don't give us anything else that's not a formally
16 published proposed rule.

17 DR. ESH: Thank you.

18 MR. CAMERON: Okay.

19 DR. ESH: Yes, we would very much like to
20 get it out as soon as possible. I tend to be,
21 personally, a bit overly optimistic about these things
22 apparently, so, you know, I don't see the need sometimes
23 to have extensive debate on every sentence.

24 But one of the difficult challenges with
25 writing a regulation is trying to foresee unintended

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1 consequences or unforeseen interpretations of what you
2 have, so that kind of expands it significantly when you
3 have to go through that process and try to think how is
4 somebody going to misinterpret this or misuse it, and
5 so that takes a lot of time. Go ahead.

6 MR. CAMERON: Go ahead.

7 MR. MAGETTE: That's a really good point
8 and I really appreciate that and I think we saw some
9 pretty good examples of that in the Part 37 Rule that
10 just came out, but I also think that's the kind of thing
11 that's appropriate fodder for review of a proposed rule.

12 And no matter what you guys do, until you
13 let people who have to actually, you know, dispose of
14 waste or processed waste, see the rule and see what it
15 does to them. You're never going to predict them all.

16 DR. ESH: Yes.

17 MR. MAGETTE: And so I think you should
18 spend less time on that and let the commenters help you
19 with that when it's published.

20 DR. ESH: Yes, I don't disagree with that.
21 I mean I've felt like some of the other efforts could've
22 gone out and we received all the comments and then made
23 the necessary changes, that's how the process is
24 supposed to work.

25 So you don't have to get it 100 percent

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1 perfect on a proposed rule.

2 MR. CAMERON: Okay, thank you. Clint?
3 You're okay. Billy? You're okay now. Okay, Tom
4 Kalinowski? All right. Let's test the phones out and
5 then we're going to come back in the room and --

6 (Crosstalk)

7 MR. CAMERON: Okay, we'll be back. I just
8 want to make sure that we are getting in touch with the
9 people on the phone. Kiandra, are you with us? Is the
10 operator there?

11 OPERATOR: I'm here. Are you able to hear
12 me?

13 MR. CAMERON: Oh, yes. Yes. Could you
14 see if there's anybody out there who wants to talk to
15 us here in Phoenix, and I would remind people that, who
16 are on the phones that if you want to talk at any time
17 just hit star 1 and give Kiandra your first and last name
18 and then she's going to put you in the queue to talk with
19 us.

20 Is there anybody on the phone right now,
21 Kiandra, who wants to ask a question or make a comment?

22 OPERATOR: At this time there's no one in
23 the queue.

24 MR. CAMERON: Okay, great. We'll come
25 back to the phones later and let's go to Ralph, Ralph

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1 Anderson.

2 MR. ANDERSON: I had a question, actually
3 two questions. In reading the SRM for SECY-13-0075,
4 although the NRC made, the Commission made very direct
5 statements about compatibility, it sounded like to me
6 when they discussed stakeholder engagement that the way
7 they worded it, and they also talked, used the word
8 "compatibility" in there, that they were still leaving
9 the door open for additional discussion I think
10 particularly with the States on the compatibility
11 issue.

12 Am I reading that properly, that having
13 said do this, it sounded like they were saying but at
14 the same time keep listening to the input you're getting
15 on compatibility?

16 DR. ESH: Yes, I would interpret it
17 similarly. So, they said this is the approach, go forth
18 with, but engage the stakeholders on it and see what they
19 think about it, get extensive feedback on it, yes.

20 MR. ANDERSON: And then my follow-on
21 question to that is, can you briefly describe, if you've
22 thought it through yet, how the States will be involved
23 separately as co-regulators prior to us seeing a
24 proposed rule in the Federal Register?

25 DR. ESH: Yes, I believe our process is on

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1 the Rulemaking working group, we have two
2 representatives of the States, is that of the -- Larry,
3 are they serving for the OAS, is that who they represent,
4 the two State members on the Rulemaking working group?

5 MR. CAMPER: Well they, in this particular
6 case, States are chosen to be on a working group for a
7 number of different reasons. And in this case I think
8 we have Texas, I believe, don't we?

9 DR. ESH: Well Texas and South Carolina.

10 MR. CAMPER: Oh, South Carolina, right,
11 yes.

12 DR. ESH: A representative from Texas and
13 South Carolina. And one of their roles is to inform the
14 other States of what's going on in the Rulemaking
15 working group process. And then, of course, when the
16 product goes out I believe all the Agreement States get
17 an opportunity to see that and comment on it prior to
18 when it's proposed.

19 MR. CAMPER: I agree. That's correct,
20 yes.

21 DR. ESH: Yes.

22 MR. CAMPER: I would add one thing, too, if
23 I might, Ralph, in answer to your question and to echo
24 Dave's comment. Based on my own discussions with the
25 Commissioners I think it's very clear that on one hand

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1 there was an interest in consistency of approach, but
2 by the same token there is a great deal of interest in
3 flexibility for the Agreement States.

4 And so I think they have specifically
5 directed us to examine this compatibility issue. It
6 will be sensitive, of course, because it's
7 compatibility "B."

8 And as part of that process we do plan to
9 talk specifically with the four States that have the
10 operating facilities so that we're positioned when we
11 communicate further with the Commission to know exactly
12 how those States feel about this matter.

13 MR. ANDERSON: Yes.

14 MR. CAMERON: Okay, and I want to find out
15 if, since we're talking about State participation in the
16 Rulemaking, I just want to make sure that we hear from
17 any States now that want to say anything about the
18 Rulemaking process.

19 But, Andrew, Andrew Stewart? Do you want
20 to say something right now, Andrew, on this?

21 MR. STEWART: (Inaudible).

22 MR. CAMERON: Okay, good. Anybody from
23 the State Governments want to talk about their
24 participation in the Rulemaking process or do they have
25 a question about this?

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1 We're going to hear from the States when we
2 get to the panel discussion on strategic assessment, but
3 I just wanted to give them an opportunity now if they
4 wanted to say anything. Rusty?

5 MR. LUNDBERG: Rusty Lundberg with the
6 State of Utah DEQ. I guess just to follow along with
7 the current topic of discussion regarding engagement of
8 States, particularly Agreement States throughout this
9 process.

10 One, previously I would agree with what
11 others have said. The level of opportunity of offering
12 comment and stakeholder engagement and all of that I
13 think has been really tremendous to be able to offer at
14 certain critical points comments back and giving
15 direction through those comments.

16 But I think that one of your slides, David,
17 that you had put up there was about potentially engaging
18 stakeholders once it's proposed and going out and maybe
19 even to the States.

20 I would again echo or reaffirm what we've
21 said before, I think for sure you would look at the
22 4-sided States to be able to conduct public meetings so
23 that there's more of an opportunity to educate and help
24 those public members understand the nature of the
25 proposal as well.

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1 And that way I think that the comments that
2 you'll receive through the public, obviously being
3 better informed, might be better, more of a directional
4 help for you as well.

5 So I think that's the only thing I would
6 offer, is that as you look at the public engagement part
7 of offering public hearings that you look at least the
8 4-sited States as an opportunity. Thank you.

9 MR. CAMERON: Thank you, Rusty. Dave?

10 DR. ESH: Yes, it's a good suggestion.
11 You know, we have processes that we follow and sometimes
12 we have to stick within those processes, but with that
13 said, we received really good input from a number of the
14 Agreement States on the previous iterations of this
15 Rulemaking that were very helpful, you know.

16 And I think it's because, to be quite frank,
17 NRC doesn't have any of the licensed disposal sites
18 under our direct purview. They're all in the Agreement
19 States, so, you know, you're the ones with the boots on
20 the ground and you gave us some really good information,
21 so we hope that continues, yes.

22 MR. CAMERON: Okay, other questions or
23 comments for David on the Rulemaking, the SRMs from the
24 Commission process? Oh, okay, good. We're going to go
25 over here and if you could just introduce yourself.

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1 MR. GOLDSTON: I'm Sonny Goldston, Chair
2 of the Waste Management Working Group for the Interview
3 Facility Contractors Operating Group, IFCOG we're known
4 as.

5 We are a consortium of all of the
6 contractors that do work for the Department of Energy
7 and I wanted to make a couple of comments here because
8 I have been following this process very carefully and
9 I'm really impressed with it.

10 My expertise is in low-level waste disposal
11 and I've managed low-level waste disposal facilities
12 for the Department of Energy and I've helped the
13 Department in their Rulemakings and their orders.

14 So I have limited expertise in the NRC
15 process and I've been really impressed with what you've
16 been doing and how you've been doing it. But just so
17 I don't mess myself up I'm going to read something that
18 I think is important, at least to me, and I hope it will
19 be to you.

20 "The low-level waste disposal facilities
21 in this Country, both commercial and DOE, are National
22 treasures." They're National treasures, we don't have
23 very many of them and it's important to get this right
24 and I would submit to you that until you analyze your
25 facilities with state-of-the-art tools and

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1 site-specific PAs, defense in depth, you don't know how
2 your sites are performing or are capable of performing.

3 The classification tables and A, B, C
4 classification tables are no longer state-of-the-art,
5 they're out of date, and they're no longer needed, in
6 my opinion in watching this. My experience shows that
7 you're underutilizing your facilities in the Agreement
8 States.

9 I'm reasonably sure when you go through
10 these performance assessments you'll find out that you
11 are, at least in the West Coast areas, underutilizing
12 your facilities. And I've seen this time and again in
13 being involved in PA reviews for DOE facilities.

14 On the East Coast maybe not, but you don't
15 know, and that's important. When we talk about the
16 protectiveness I don't think there's anything in your
17 current rule that says you're not being protected, but
18 I think you are.

19 I don't think there's any problem with
20 that, but I think you are underutilizing your facilities
21 and that's sad because we've got a lot of work to do
22 that's going to create waste.

23 So, again, until you do the PAs and you base
24 your WACs on your PAs and your defense in depth program
25 as described by SECY-13-0075, you are not going to know

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1 the answers to those questions and you can't continue
2 to base it on, I don't know how old is it, those tables?
3 How old are they?

4 They're pretty old and they're not current
5 and, you know, I think they're protective, but you don't
6 know the answer to those questions.

7 MR. CAMERON: Okay. Thanks, Sonny.
8 Dave, do you have anything you want to say on Sonny's
9 comments and the relationship to the Rulemaking?

10 DR. ESH: Yes, thanks for the comment,
11 Sonny. Yes, the waste classification table served a
12 good purpose and originally when they were developed
13 there was discussion about how many low-level waste
14 sites there were going to be.

15 And at the time they felt there were going
16 to be many low-level waste sites and they didn't want
17 people to be needing to interpret how to do the intruder
18 analyses, which they felt was relying on kind of the
19 human interaction with the system and you could have all
20 sorts of interpretations.

21 So they wanted it to be done consistently,
22 therefore, they decided, NRC decided, we'll do the
23 analyses internally and come up with those generic
24 classification limits that would apply to all.

25 The challenge was though that you have a

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1 diversity of sites across the Country in terms of the
2 environmental conditions, what might be the appropriate
3 human practices at a site, the disposal design, all of
4 those things can be different and are different from
5 site to site.

6 NRC received comments on the waste
7 classification system and, as I think you were alluding
8 to, a number of those limits that are appropriate for
9 a humid site may be conservative with respect to an arid
10 site, but it also goes the other way.

11 So, for instance, the limit for plutonium
12 at an arid site would generally be lower than the limit
13 for plutonium at a humid site because of the
14 resuspension inhalation capabilities for it.

15 But the proposed rule would basically have,
16 or in the draft rule that we had leading up to this, we
17 had an "or" approach. So the waste classification
18 tables would be maintained but somebody could use waste
19 acceptance criteria and that would basically be a
20 site-specific analysis outside of the waste
21 classification tables.

22 The reason why they're kind of still there
23 is because they're used in a lot of things. They're in
24 the Low-Level Waste Policy Act, I believe, they're
25 referenced in other legislation, so it's a really, it

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1 would be a big effort to kind of strip those out
2 completely when other things reference them.

3 And, you know, whether you could do that,
4 yes, I think you certainly could. It would probably be,
5 as I talked about, the 2-prong effort of the
6 site-specific Rulemaking and then a bigger Rulemaking
7 possibly. If you were going to do that bigger
8 Rulemaking that would be the place to look at that.

9 MR. CAMERON: Okay. Dan? Yes, yes, no?

10 MR. SHRUM: Thanks, David. My name is Dan
11 Shrum, I'm with EnergySolutions. And you just said
12 something as you were explaining the 55 tables that they
13 were done to sort of limit intruder analyses. So in the
14 new SRM, I'm not going to read it, it's Number 6, but
15 it's "The proposed rule should clearly indicate that the
16 intruder assessments," what is that going to look like
17 in your mind?

18 What specifically will the NRC be giving
19 guidance for? Will you be giving guidance for these are
20 the intruder assessments you need to look at or is it
21 going to be generic in nature and anything goes? What
22 is that going to look like in David Esh's mind?

23 And I know that you're not down that path
24 yet, and we don't know, maybe it's in the guidance that
25 we can't see yet, but what does that look like?

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1 DR. ESH: Yes, I talked about this a bit in
2 a conference this week, a couple occasions. On one hand
3 we like to afford flexibility for people to evaluate the
4 scenarios that they think are appropriate at their site.

5 On the other hand, I believe, sometimes we
6 see people are very narrow-minded about the human
7 influence of the environment and how things will evolve
8 over time, okay.

9 And the example I've used in the past is Las
10 Vegas, okay. Two hundred years ago Las Vegas was a lot
11 different place than it is today. So if you asked
12 somebody 200 years ago, living near Las Vegas, what were
13 people going to be doing there 200 years in the future,
14 they probably would've been pretty far off with their
15 estimate of what people were going to be doing.

16 So you have to be kind of open-minded about
17 the human part of the environment, but you also then
18 don't want to ensure endless speculation because
19 people, the imagination of people is unlimited and you
20 can come up with anything.

21 You know, this is a regulatory process that
22 you have to do, not a risk analysis for the intruders
23 I would say, but it's a regulatory analysis. So we try
24 to look at something and we use like funny words like
25 "reasonably conservative" and stuff like that.

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1 But basically what you're trying to do is
2 come up with a scenario that if you showed it to somebody
3 independent, say somebody from the International
4 community that's not familiar with your site or anything
5 like that, they could look at it and say okay, yes, that
6 seems pretty reasonable for a scenario to evaluating
7 your problem.

8 It's kind of that standard, so what you need
9 to put in rule language to ensure that outcome compared
10 to say in guidance, we try to take an approach of kind
11 of the Einsteinian approach to regulation which is the
12 rule language should be as simple as possible but no
13 simpler.

14 So that's what we shoot for, whether we
15 always achieve it, that's what the whole process is for,
16 that the proposed language will go out and you'll have
17 a chance to comment on it and see whether we got it right.

18 MR. CAMERON: Okay, go ahead.

19 MR. SHRUM: So it won't be specific? It
20 will not say "look at these scenarios?"

21 DR. ESH: Yes, I think it -- I can't say
22 that right now, but I don't anticipate that it's going
23 to be much different than what we had issued before that
24 was publicly available, there was draft language put out
25 that people saw.

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1 And it kind of gives a philosophy to set the
2 scenarios. But it's important for people to understand
3 that can have a big influence on your calculational
4 results, the particular scenarios you pick.

5 And what we like to see is that somebody
6 will, if they're going to use kind of site-specific
7 scenarios they'll also look at the kind of common
8 generic scenarios and show the difference between the
9 two, so that, especially, their regulators are informed
10 about the importance of the scenario and they can
11 critically look at that, and regulators or other
12 stakeholders, but it's important to be transparent in
13 the importance of the scenarios that are selected.

14 MR. CAMERON: Okay. Any questions,
15 observations about Las Vegas or the Einsteinian
16 approach, or anything else? Yes? And please
17 introduce yourself.

18 DR. ESH: It's Friday, Chip.

19 (Laughter)

20 MR. JAMES: David James. I just had, you
21 know, one observation. I think what we would be looking
22 for is that number one that it's risk informed. Number
23 two, that it uses realistic current technology, and
24 three, that some restraint is shown on throwing a lot of
25 canards around the (inaudible) scenarios. So that was

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1 basically the comment.

2 DR. ESH: Thank you, yes.

3 MR. CAMERON: And thank you. Let's see if
4 anybody on the phone has anything. Kiandra, is anybody
5 in the queue on the phone?

6 OPERATOR: There are no questions in the
7 queue at this time.

8 MR. CAMERON: Okay. And, Melanie,
9 nothing on the web at this point?

10 MS. WONG: We do have one comment there.
11 (Inaudible).

12 MR. CAMERON: We'll have to -- let me get
13 you on the, let's get this on the transcript.

14 MS. WONG: So Rich Janati commented and
15 he's basically stated that States and compacts are also
16 providing input through the Low-Level Waste Forum
17 Working Group on Part 61.

18 MR. CAMERON: Great. Thank you, Rich, for
19 that comment. Anybody else in the room have a question
20 or observation about the Rulemaking status at this
21 point?

22 DR. ESH: Apparently I didn't give you a
23 Christmas card this year, did I, Chip? I mean --

24 MR. CAMERON: Well not yet, but there's
25 still several months.

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1 DR. ESH: From last year.

2 (Off the record comments)

3 MR. CAMERON: But we actually are ahead of
4 time and I was going to make a suggestion which perhaps
5 the tee up, so to speak, for the panel discussion on
6 strategic assessment is going to be done by Melanie
7 Wong, and I should note that Melanie has orchestrated
8 a lot of things for this meeting on the substantive
9 aspect, slides and whatever.

10 Do we want to go ahead and hear Melanie's
11 tee up at this point and then you can have a chance to
12 ask her some clarifying questions and then we'll take
13 a break and come back for the panel and I think that will
14 help us with our flights.

15 And, Melanie, is that okay with you? Are
16 you ready to do that?

17 MS. WONG: Yes.

18 MR. CAMERON: Okay. And, David, thank you
19 very much.

20 DR. ESH: Sure, thank you.

21 MR. CAMERON: Thank you. So we're going
22 to bring Melanie up and you have, her PowerPoints are
23 in your slide collection and we'll have her come up and
24 do that and hopefully we didn't take her too much by
25 surprise. Okay.

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1 MS. WONG: Thank you, Chip. I'd like to
2 thank everyone, for those of you who stayed around after
3 the conference and especially those who came in
4 especially for this meeting. There's a lot of
5 panelists that came in and so I really appreciate you
6 coming to the meeting. Next slide, please.

7 Today I'll provide some background on the
8 2007 Strategic Assessment. I'll discuss NRC completed
9 activities, proposed updates to the assessment, and
10 discuss next steps in the process. Next slide, please,
11 Dave.

12 As Larry mentioned back in 2006 the
13 Low-Level Waste Program at the NRC was in a maintenance
14 mode and yet it faced many new and emerging challenges
15 and issues. Some of these include increased storage of
16 Class B and C low-level waste due to the potential
17 closing of the Barnwell Facility in 2008 to out of
18 compact generators.

19 There is also the potential need to dispose
20 of a lot of decommissioning waste and depleted uranium.
21 There was also increased concerns related to the storage
22 of low-level waste in general and sealed sources in
23 particular, and there was also new waste streams that
24 could be generated, for example, by the next generation
25 of reactors. Next slide, please.

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1 As a result the NRC staff undertook an
2 effort to conduct a Strategic Assessment of the
3 Low-Level Waste Regulatory Program and the goal of the
4 assessment was to identify and prioritize staff
5 activities so that it could continue to ensure safe and
6 secure disposal of low-level waste as well as ensure
7 adaptability and predictability in the regulatory
8 program. Next slide, please, Dave.

9 Based on extensive stakeholder inputs the
10 NRC received a variety of activities to be considered
11 to be included in the assessment and these were
12 evaluated based on the strategic objectives.

13 A list of 20 activities was developed
14 responsive to programmatic needs and they were assigned
15 priorities of high, medium, or low. They ranged from
16 narrowly focused activities, such as updating guidance
17 on extended storage, to broader activities such as
18 suggesting legislative change to Congress to improve
19 the National Program. Next slide, please, Dave.

20 Seven tasks were designated as high
21 priorities, and these are updating the guidance on
22 extended storage of low-level waste. The uncertainty in
23 the availability of access to low-level waste disposal
24 facilities for many licensees was an issue facing the
25 community.

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1 Another high priority activity was related
2 to the alternate disposal of low activity waste per 10
3 CFR 20.2002 in non-traditional low-level waste
4 facilities such as RCRA facility.

5 Based on stakeholder input it appeared that
6 the NRC process of authorizing these disposals was not
7 entirely consistent and needed to be clarified in
8 guidance.

9 Two additional activities included
10 developing guidance for alternate waste classification
11 in 10 CFR 61.58 and determining whether depleted uranium
12 warranted a change in the waste classification tables
13 in 10 CFR 61.55. And the main focus of this activity
14 was to determine whether a large quantity of depleted
15 uranium could be disposed of in near surface facilities.

16 Another high priority activity was
17 updating the Concentration Averaging and Encapsulation
18 Branch Technical Position, which was published in 1995,
19 and the NRC would update the Guidance Document to
20 clarify in several areas, the underlying basis of its
21 position.

22 We could also choose to develop internal
23 procedures and guidance documents regarding reviewing
24 the waste import and export applications, and we could
25 also perform a scoping study on a need to expand the

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1 financial assurance for Category 3 and 4 sealed sources
2 to account for total life cycle costs, including
3 disposition. Next slide, please, Dave.

4 Six tasks were designated as medium
5 priorities and these are developing licensing criteria
6 for Greater Than Class C waste disposal facilities.

7 Under the Low-Level Radioactive Waste
8 Policy Amendment Act of 1985, the Department of Energy
9 is responsible for the disposal of GTCC waste and the
10 DOE is in the latter stage of defining a preferred method
11 of disposal in a topical Environmental Impact
12 Statement.

13 As a result, NRC would need to develop
14 licensing criteria for such a facility. Two medium
15 priority activities are related to our guidance
16 documents. Dozens of low-level waste documents have
17 been published in the last 25 years and we could choose
18 to consolidate those into one document, it would also
19 help with knowledge management.

20 We could also choose to consolidate all of
21 our documents related to disposition of low activity
22 waste. The three remaining medium priority activities
23 included identifying low activity waste disposal
24 regulations and practices at various agencies and
25 programs, specifying improvements and suggesting

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1 legislative change.

2 We could also identify potential new waste
3 streams with different radionuclides than have been
4 assessed in existing regulations, and we could develop
5 and issue an information notice that would provide the
6 techniques and methods that small generators could use
7 to minimize the amount of waste that they generate.

8 And this task was developed in the context
9 of reducing waste due to the potential closing of the
10 disposal facility back in 2008. Next slide, please,
11 Dave.

12 Seven tasks were designated as low priority
13 and these include promulgating a rule that would define
14 the conditions under which low activity waste could be
15 disposed of in Resource Conservation and Recovery Act
16 waste disposal facility.

17 We could also develop generic waste
18 acceptance criteria for the disposal of low-level waste
19 in 11e(2) mill tailing impoundments, and we could also
20 promulgate regulations that would identify the data
21 necessary to track the origin, the management, and the
22 disposition of all low-level waste. Next slide,
23 please.

24 Since 2007 the NRC staff has completed
25 three of the high priority activities. In 2008 and 2011

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1 the staff prepared regulatory issue summaries that
2 clarified our position regarding extended storage of
3 low-level waste.

4 In 2009, the staff also developed interim
5 staff guidance describing the procedures for our
6 reviewing, authorizing, and documenting the results of
7 the staff review of alternate disposal requests for low
8 activity waste.

9 We have also completed a DU Disposal
10 Analysis and while the NRC staff has concluded that
11 large quantity of DU could be disposed of in near surface
12 facilities under certain conditions and still meet the
13 performance objectives of 10 CFR, Part 61, the NRC staff
14 proposed change in the regulation to incorporate these
15 conditions.

16 Among the revision to the regulation is the
17 incorporation of site-specific waste acceptance
18 requirements in 10 CFR 61.58, and this revised revision
19 would supersede and replace the high priority task of
20 developing guidance for 10 CFR 61.58.

21 The NRC staff is nearing completion of the
22 branch technical position on concentration averaging
23 and encapsulation, and the last two activities were put
24 on hold due to resource constraints. Next slide,
25 please.

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1 After seven years much progress has been
2 made in several activities in the assessment. In
3 addition, the National low-level waste program
4 continues to evolve and is very dynamic.

5 So, therefore, to set the directions in the
6 next several years for the NRC Low-Level Waste
7 Regulatory Program the NRC is embarking on updating its
8 strategic assessment. A review of the assessment would
9 be one of the first tasks in the update process and could
10 result in the reprioritization of some of the
11 activities.

12 For example, the medium priority activity
13 in the assessment for developing a licensing criteria
14 for Greater Than Class C waste disposal facility could
15 become a high priority activity based on the current
16 low-level waste landscape on GTCC waste.

17 The NRC could also elect to continue
18 working on the remaining high priority task that was put
19 on hold due to resource constraints. For example, we
20 could complete the activity performing a scoping study
21 regarding financial assurance for Category 3 and 4
22 sealed sources.

23 And this report, this would be informed by
24 the related recommendation from the Radiation Source
25 Protection and Security Task Force, which report is due

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1 out in August 2014, as well as the Low-Level Radioactive
2 Waste Forum Disused Source Working Group Report. Next
3 slide, please.

4 Informal outreach efforts have identified
5 some activities which could remain in the assessment and
6 some which could be added. We spoke about it,
7 developing licensing criteria for a GTCC waste disposal
8 facility.

9 Another activity which could be moved from
10 a low priority to a high priority is promulgating a low
11 activity waste Rulemaking, and this is due to the
12 potential need to dispose of a large quantity of
13 decommissioning waste in the future.

14 New activities could include a revision to
15 the Waste Manifest to consider over-estimation of
16 certain radionuclides and we could also address waste
17 attribution issues. Next slide, please.

18 One key aspect of the assessment involved
19 information gathering, and that's why we're here today.
20 We thought it would be very beneficial to hear from the
21 public and also from our representatives from the
22 Agreement States and industry.

23 And so we'd like to hear in terms of what
24 does the landscape look like in the future for the
25 Low-Level Waste National Program and what are the

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1 regulatory response to these changes in the landscape.

2 Additionally we plan additional outreach
3 efforts the future. We will issue a Federal Register
4 notice in the next several months to solicit comments
5 on proposed activities and we also plan to request
6 comments once we have drafted an updated Strategic
7 Assessment. Next slide, please.

8 This concludes my presentation. Thank you
9 for your attention.

10 MR. CAMERON: Okay. Thank you, Melanie.
11 And, David, could we see Slide 27?

12 DR. ESH: (Inaudible).

13 MR. CAMERON: I think it's the next one.
14 Huh, it's not on there.

15 MS. WONG: Which was the --

16 MR. CAMERON: There's three -- In your
17 slide package you should have a Slide 27 and they are
18 the three questions that are going to be posed.

19 MS. WONG: Okay, so it is forward, if you
20 go forward.

21 (Off microphone discussion)

22 MR. CAMERON: Okay. Well there's three
23 questions for our panelists and for all of you who are
24 in the room and on the phones and on the net, and I'm
25 just introducing this now because I want to give you a

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1 chance to ask Melanie any clarifying questions about her
2 Strategic Assessment presentation because we are going
3 to get into the substantive issues that we want to hear
4 from you on.

5 But this would be a time to ask for
6 clarifying questions and after we're done with that
7 we'll take a break and you may want to augment the free
8 NRC breakfast that David referred to.

9 There are coffee places soon -- And there
10 are the topics. And that's going to be the substantive
11 discussion and I just wanted to juxtapose that with the
12 idea of clarifying questions and we're going to go to
13 -- Are you ready, Melanie?

14 MS. WONG: Yes.

15 MR. CAMERON: Okay. We're going to go to
16 Bill Dornsife and then we're going to go to Scott. And
17 please introduce yourself.

18 MR. DORNSIFE: Bill Dornsife, Waste
19 Control Specialist. I guess I'm kind of interested in
20 what NRC defines as the need for licensing criteria for
21 Greater Than Class C?

22 I mean we recognize that, you know, there's
23 renewed interest in terms of using existing license,
24 intermediate and near surface disposal facilities for
25 disposal of Greater Than Class C, so what does licensing

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1 criteria mean?

2 MS. WONG: So we would go back and we would
3 look, I mean we're taking a look at the regulation to
4 see if it's suffice in terms of licensing a GTCC waste
5 disposal facility.

6 We recognize that the regulations do
7 specify that if you are a geologic repository you would
8 use Part 60 regulations, but we're looking to see in
9 terms of the future if there is a need to augment the
10 regulations.

11 MR. CAMERON: Okay. And, Scott?

12 MR. KIRK: Yes, Scott Kirk, WCS. Yes,
13 this is a continuation for the Greater Than Class C
14 question or issue. I think it's very timely that you
15 start to assess this as part of your Strategic
16 Assessment.

17 This is really a continuation of questions
18 I've asked earlier this week and also at your
19 presentation, that was very well done, Melanie.

20 MS. WONG: Thank you.

21 MR. KIRK: Now my question is the role of
22 an Agreement State. Now as we have spoken earlier this
23 week there's been a lot movement, some discussions about
24 the difference between GTCC waste, which is waste that's
25 generated by NRC licensees, verses DOE GTCC-like waste.

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1 And it's my understanding, and maybe you
2 can reiterate that, that if it's GTCC-like waste that's
3 generated by the Department of Energy an Agreement State
4 today has the ability to license those facilities, and
5 maybe there's not the need to develop, or a requirement
6 to develop that technical criteria as it applies to
7 GTCC-like waste.

8 However, when it applies specifically to
9 NRC regulated GTCC waste there is a requirement for
10 developing the criteria, but as Larry had mentioned
11 earlier this week that there's a provision in 10 CFR
12 61.55 where maybe the technical criteria could be
13 defined, but maybe an Agreement State could actually
14 license that facility.

15 And maybe the time, you can either defer
16 answering the question now, but I think it should be teed
17 up for the panelists, because I think this is a very
18 timely issue especially as the Department of Energy is
19 moving forward with their Environmental Impact
20 Statement.

21 MR. CAMERON: Okay. And we're going to
22 come back over here. I just -- We are, I think as Scott
23 alluded to and, Melanie, we're going to go to you for
24 anything you want to say on this, but I think that we
25 are getting into the substantive aspect of this.

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1 So I'm going to put that Agreement State
2 licensing of GTCC facilities just as a placeholder over
3 here, but let me go to Larry and Melanie for anything
4 they want to say at this point.

5 MR. CAMPER: Just a couple of points about
6 the GTCC question, and I think Chip is right. I think
7 the level of detail that you're starting to get into
8 around that issue is something you ought to have during
9 the panel discussion, that would be helpful.

10 But just to kind of set the landscape for
11 that, as we all know the Department of Energy is working
12 toward completion of its Final Environmental Impact
13 Statement around the GTCC question.

14 I think we all realize that under the
15 Low-Level Waste Policy Act as amended in '85 the NRC is
16 charged with licensing a facility for the disposal of
17 GTCC waste which was licensed by the Nuclear Regulatory
18 Commission.

19 There is something called GTCC-like waste,
20 which is a DOE product over which we have no regulatory
21 authority, and what's interesting about it is the more
22 we look at this, and in fact I just spoke to Frank
23 Marcinowski this week, we want to have a meeting with
24 the Department of Energy and talk about this because
25 when you look at Part 61 with regards to criteria you

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1 find no criteria, you find verbiage that it's not
2 suitable for near surface disposal.

3 However, in 61.55(a)(2)(iv), the
4 Commission put an interesting provision in the
5 regulation that said that geologic repository per 60 or
6 63 unless an alternative is approved by the Commission
7 consistent with this Part.

8 That seems to imply this Part, meaning,
9 getting back to Scott's question, the Texas Regulations
10 are a parallel to Part 61 if you will. So we need to
11 explore that provision carefully and we've been talking
12 with the Office of General Counsel about that and we do
13 want to meet with DOE and we will see if that pathway
14 could work, for example, for the State of Texas as an
15 alternative.

16 I think it's very clear when the Commission
17 put that part, that component of the regulation in place
18 it had three things on its mind. Number one, if you read
19 the background on the Statements of Consideration it was
20 clear that it didn't want to exclude a State operated
21 facility, in other words, it didn't have to be
22 exclusively a Federal facility.

23 Number two, they wanted to have the pathway
24 for allowing an alternative to geologic disposal and
25 also the role of the State is articulated somewhat in

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1 that Statements of Consideration around the part that
2 I cited, the 61.55(a)(2)(iv).

3 So what we want to do is explore that
4 thoroughly. Now with regards to criteria itself, yes,
5 that poses an interesting question, too, and perhaps
6 the panel, when you explore this, I'll help set the stage
7 for that.

8 I mean on one hand I think everyone
9 understands the characteristics of GTCC waste and
10 perhaps the need to be more specific about some criteria
11 as to how it should be disposed of, deeper, barriers,
12 and so forth.

13 You have to juxtapose that though against
14 the ongoing Rulemaking which requires a site-specific
15 performance assessment and what might that
16 site-specific performance assessment tell you about the
17 disposal of GTCC waste.

18 So when we say "criteria" we kind of have
19 those two thoughts in mind and getting some additional
20 input from the panel today when you talk about this
21 particular topic would be of value.

22 But one thing I want to make sure that does
23 happen for the NRC and that is as the Department of
24 Energy proceeds to complete its FEIS, and presumably
25 that may happen toward the end of this year, I want to

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1 make absolutely certain that the Nuclear Regulatory
2 Commission does not find itself then in the critical
3 pathway that would delay disposal of GTCC once DOE
4 articulates its position, its preferred alternative.

5 So whatever it ends up being, whatever
6 regulatory pathway we're able to use or whatever
7 criteria that we create, it is timely now that we proceed
8 for that reason.

9 MR. CAMERON: Thank you, Larry, for that
10 tee up, and, Melanie, do you want to add anything to what
11 Larry said on that?

12 MS. WONG: Just one note in terms of GTCC
13 waste under the Low-Level Waste Policy Amendment Act,
14 1985. It's clear that in terms for the disposal
15 facility for GTCC waste, it is something that NRC would
16 license, so just to clarify.

17 MR. CAMERON: Okay. And we're on
18 clarifying questions to Melanie and obviously teeing up
19 some issues that are going to be the subject of the panel
20 discussion. Michael?

21 MR. GARNER: Mike Garner with the
22 Northwest Compact. Melanie, in your priorities you
23 referenced low activity waste two or three times. Does
24 that include waste that potentially now goes to a Part
25 61 facility, the very lower end of that, or is that waste

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1 that has never gone to a Part 61 facility?

2 MS. WONG: No. We would include some of
3 the lower end that have gone to Part 61 facilities.

4 MR. GARNER: Because one of the things that
5 I hear all the time is, well, the sited States there's
6 no competition. Well for the Richland site by doing so
7 in providing another pathway for disposal for the lower
8 end of the waste that currently goes to Richland, it
9 would be increasing the unit cost for all of the
10 generators that must continue to use the Richland
11 facility. So I just wanted to point that out.

12 MS. WONG: Okay, thank you.

13 MR. CAMERON: Thank you, Mike. Let's go
14 to Ralph.

15 MR. ANDERSON: The remaining generic, I
16 will obviously have a lot to say in the next session,
17 but one comment on Greater Than Class C and recognizing
18 some of my colleagues here, laws are not cast in
19 concrete.

20 Laws can be changed, in fact they're
21 changed all the time. And in fact my understanding of
22 the law governing Greater Than Class C waste is that
23 nothing will happen unless a new law is passed, because
24 the way the law reads, once DOE sends its report to the
25 Congress DOE is to stop and cease until Congress acts,

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1 I believe is the wording in the law.

2 So there will be a new law and all things
3 can be changed. I was just curious about the five to
4 seven years. I don't remember how we came up with that
5 in 2007, but I'm just trying to gain an understanding,
6 is there something inherent about five to seven years?

7 We keep using that phraseology in the
8 Strategic Assessment or is that just a term of
9 convenience because one of the comments that I'll be
10 making in the next session is we ought to be thinking
11 about life of RAD waste generation?

12 You know we have a very foreseeable 85-year
13 horizon right now in which we can predict certain kinds
14 of waste being generated. But I wasn't sure if there's
15 something in your budgeting or planning process
16 inherent within NRC that restricts you to looking only
17 at the near future.

18 MR. CAMERON: And can we give some context
19 to people? Do we have a slide that has that five to
20 7-year statement on it?

21 MS. WONG: It's actually the Slide 27.

22 MR. CAMERON: I mean I think that might be
23 helpful for people.

24 MALE PARTICIPANT: Another topic slide.

25 MR. CAMERON: Oh, okay. There it is.

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1 This is the first question for the panel, is what changes
2 are anticipated and that we're looking, reference five
3 to seven years and, Melanie, do you want to take a first
4 stab at explaining the five to 7-year timeframe?

5 MS. WONG: It wasn't necessarily tied to
6 any regulations or internal process, but we took a look
7 seven years ago and so just in terms of another series,
8 it would be another seven years, so that's why. There's
9 nothing special about that.

10 MR. CAMERON: Okay, good. Good question.
11 And, Clint?

12 MR. MILLER: Yes. Clint Miller from
13 Pacific Gas & Electric. On your scoping update
14 assessment slide you mentioned revisions of the Waste
15 Manifest guidance and waste attribution in the last two
16 bullets.

17 Last year at this time there was a public
18 meeting on that guidance. Waste manifesting could
19 potentially affect the attribution, depending on what
20 that guidance would be, and if that attribution were
21 done, it might better inform the DOE's Waste Management
22 Information System which would go a long way to tracking
23 low-level waste at least as to where it came from and
24 where it was disposed of.

25 So in saying it's scoping does that mean

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1 it's not necessarily bumped up on the priority list at
2 this time? I was just a little confused because you had
3 a public meeting, so obviously it must've had some
4 importance.

5 MR. SUBER: Now, Melanie, I can handle that
6 one. Yes, this is Gregory Suber from NRC, Low-Level
7 Waste Branch Chief. We are still working the Uniform
8 Waste Manifest revisions.

9 What we've discovered in working through
10 the process is that some of the revisions that we were
11 proposing for the Waste Manifest in the Guidance
12 Document have to wait on Part 61 because they're
13 complimentary.

14 So in the interim we plan to issue a RIS that
15 will allow us to have some benefit from some of the work
16 that we've done on the Waste Manifest and we're going
17 to complete the rest of the document as we work through
18 the Part 61 process.

19 So does that answer your question? Okay.

20 MR. CAMERON: Okay. Let me go to the
21 phones. Kiandra, do we have anybody in the queue with
22 a question for Melanie?

23 OPERATOR: I'm sorry, not at this time.
24 There are no questions in the queue.

25 MR. CAMERON: Kiandra, are you there?

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1 OPERATOR: Yes, I'm here. There are no
2 questions in the queue at this time.

3 MR. CAMERON: Okay, thank you. Thank you
4 very much. And is Dave going to see anything that comes
5 on the net?

6 MS. WONG: There's nothing.

7 MR. CAMERON: There's nothing, okay, fine.
8 Anybody else in the audience, clarifying questions?
9 Yes?

10 MR. JAMES: This is David James again, just
11 a one side comment. I read something recently that it
12 takes about five to seven years to make any significant
13 cultural change in a large organization.

14 So, given that, if we know right now with
15 the change it's going to be able to take five to seven
16 years to implement it.

17 MR. CAMERON: Interesting, interesting
18 point. I know that's -- We read the same thing. Okay,
19 Bill Dornsife?

20 MR. DORNSIFE: This is Bill Dornsife,
21 Waste Control Specialist. Now that the last year's
22 public meeting is mentioned, a major topic of discussion
23 at the meeting was the Phantom 4 and how to fix it.

24 Can anybody update us on what the status of
25 that effort it?

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1 MR. SUBER: Yes. This is Gregory Suber
2 again. What the staff is in the process of doing is
3 issuing a Regulatory Issue Summary. And what the
4 Regulatory Issue Summary is going to do, it's going to
5 point to existing NRC guidance that tells people who
6 have to fill out the Manifest how they could use scaling
7 factors consistent with previous NRC guidance, which
8 would give waste generators or people who are disposing
9 of waste the option of using the previous guidance to
10 substitute a value for the lower limits of detections
11 that they are currently using on the Manifest.

12 MR. CAMERON: Okay. Anybody else on
13 clarifying questions? Okay, we're ahead of time --

14 MALE PARTICIPANT: That's all right.

15 MR. CAMERON: -- and what I'd like to do is
16 have everybody back, the panel up here and we'll put a
17 slide up on who the panelists are, Larry already
18 identified them earlier.

19 But if everybody could be back at 10:00,
20 okay, that gives you time to go out to get coffee.
21 There's one coffee place about a half block, there's a
22 Starbucks, whatever, so just do that and we'll come back
23 and we'll start the panel discussion. Thank you.

24 (Whereupon, the foregoing matter went off
25 the record at 9:33 a.m. and went back on the record at

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1 10:06 a.m.)

2 MR. CAMERON: Okay, if we could have our
3 panelists up we'll get started with the strategic
4 assessment portion of the meeting. And in a minute I'm
5 going to ask the panelists to just briefly introduce
6 themselves.

7 And we'll start with Bill Dornsife, and
8 we'll go down this way. And just a couple real simple
9 ground rules, when we get into the panel discussion, if
10 you want to say something, if you could just turn your
11 name tent up.

12 Thank you, Dan. Now that was the
13 challenge. Now I know you can do that. So we're good,
14 we're good. But if you could just do that, then you
15 won't have to worry about jumping into the conversation.

16 And the first issue, and Melanie, could we
17 see that mysterious Slide 27? We always have Aby
18 Mohseni recapping. Okay, this first topic is what
19 changes are anticipated to the National landscape and
20 the level of radioactive waste area, context of safety,
21 security, protection of the environment in the next five
22 to seven years.

23 What I'm going to do is, after we get done
24 with just the simple introductions, I'm going to ask
25 each panelist to give me one major change that they think

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1 is going to happen and just enough to explain, to allow
2 people to understand what that is.

3 I'm going to put them on the board right
4 there. And then we're going to come back and have a
5 discussion of them. So it's sort of a little
6 brainstorming here. But then we'll go through each
7 one.

8 And the purpose of the panel is not just to
9 hear what the panelists' perspectives are, each
10 panelist's perspective, but to hear what others on the
11 panel think about that perspective. So hopefully we'll
12 have an interesting dialogue on the issues.

13 But we'll tackle that topic first. And we
14 do have Greg Suber from the NRC on the panel, who's the
15 branch chief, okay. And everybody works for you, as you
16 always tell me.

17 MR. SUBER: Except Larry, I think.

18 MR. CAMERON: Except for Larry? Okay.
19 But Greg is on the panel as a resource for the rest of
20 the panel, in terms of providing information that might
21 be needed on issues or perhaps if there's an
22 implementation issue that the NRC might want to know
23 about. And Greg might pose that to you.

24 So I think we're ready to go. And we are
25 ahead of time. So we have plenty of time. But, Bill,

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1 can we just start with you, introduce yourself? And if
2 you want to say, you know, a sentence, anybody wants to
3 say a sentence or two about what they would like to see
4 achieved by the panel, that would be fine too. But you
5 can just simply introduce yourself if you want to.

6 MR. DORNSIFE: Bill Dornsife, Waste
7 Control Specialists. I think the single most important
8 development in the near future in the area of
9 radioactive waste management will be our new exempt
10 disposal act Waste Control Specialists at the RCRA
11 landfill. Because it no longer is based on the
12 regulatory exemption, but it's based on concentrations
13 that were developed with a site specific PA.

14 MR. CAMERON: Okay. And Christine?

15 MS. GELLES: I'm Christine Gelles. I'm
16 the Associate Deputy Assistant Secretary for Waste
17 Management in the Office of Environmental Management at
18 the Department of Energy.

19 And within our portfolio is ensuring we
20 have disposal facilities for all of the DOE generated
21 waste or the other wastes that are designated Federal
22 waste under the Low-Level Waste Policy Act amendments.
23 And that includes providing for the environmental
24 analysis to site a Greater Than Class C low-level waste
25 disposal facility. I'm stymied to pick just one in

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1 terms --

2 MR. CAMERON: Well, okay. Well, we'll --

3 MS. GELLES: -- of developing the
4 landscape.

5 MR. CAMERON: I'll tell you what, we'll
6 come back. And we'll just do introductions now.

7 MS. GELLES: Perfect, thank you.

8 MR. CAMERON: And I would just ask
9 everybody, the mics are not really directional either.
10 So you probably have to speak pretty directly into them.
11 Okay, Ralph, you want to just introduce yourself too?

12 MR. ANDERSON: Sure. Are we going to do
13 away with the one sentence --

14 MR. CAMERON: Well, what I'd like to do is
15 just have you all just introduce yourselves.

16 MR. ANDERSON: Ralph Anderson --

17 MR. CAMERON: And then we'll come back.

18 MR. ANDERSON: -- Nuclear Energy
19 Institute.

20 MR. CAMERON: Okay.

21 MR. BROUSSARD: Brad Broussard, Texas
22 Commission on Environmental Quality with the State of
23 Texas.

24 MR. LUNDBERG: Rusty Lundburg, with the
25 State of Utah Department of Environmental Quality. I'm

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1 the Director of the Division of Radiation Control in
2 that department.

3 MR. SUBER: Gregory Suber, Chief of the
4 Low-level Waste Branch at the NRC.

5 MR. FORDHAM: Earl Fordham with the State
6 of Washington Department of Health, Office of Radiation
7 Protection. I'm the Deputy Director in charge of the
8 waste management section.

9 MR. SHRUM: Dan Shrum, EnergySolutions,
10 regulatory affairs.

11 MR. GARNER: Mike Garner with the
12 Washington State Department of Ecology. I serve as
13 Executive Director for the Northwest Compact.

14 MR. CAMERON: Okay. Thank you all. And
15 we heard from Bill. I put his major change up on the
16 board. And we just heard from Christine about it's hard
17 to pick just one. But why don't you go ahead and tell
18 us what you think are going to be the major things?

19 MS. GELLES: Well, GTCC Disposal, you
20 know, a policy decision, a recommendation from the
21 Department, and then the regulatory aspect of that we
22 teed up before the break is an obvious one.

23 And then the second one would be the
24 construction of new DOE disposal facilities and the
25 impact that has on the commercial market and therefore

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1 the availability and viability of facilities.

2 MR. CAMERON: Okay. Great, thank you.

3 GTCC and construction of new --

4 MS. GELLES: New DOE disposal facilities.

5 MR. CAMERON: Okay. And Ralph?

6 MR. ANDERSON: Yes. I'd just like to
7 build on the five to seven years issue with this, just
8 by a simple factoid. There are four large nuclear power
9 plants currently under construction that will go into
10 operation in the next three to five years. And the
11 expectation is, is that they will shut down for
12 decommissioning right around the year 2100.

13 So I'd like to suggest that we have a
14 predictable time frame from nuclear electricity
15 generation and the associated fuel cycle right now that
16 extends throughout this entire century.

17 So I'd just like to suggest that as you move
18 forward with strategic planning that the strategic
19 horizon, it may be very murky as you get further and
20 further out. But I'd suggest a placeholder of through
21 this century rather than the next five to seven years.

22 MR. CAMERON: So a longer strategic
23 horizon tied to nuclear generation, the new facilities?

24 MR. ANDERSON: Yes.

25 MR. CAMERON: Okay. And Brad?

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1 MR. BROUSSARD: Well, first of all I'd like
2 to thank the NRC for the invitation for Texas to
3 participate on this panel. I think it's a lot of good
4 dialogue that's going on that actually should continue.

5 Hopefully, some of these discussions will
6 help further the progress that's needed for some of
7 these waste management issues. Chip, I would have to
8 agree with Christine. I think Greater Than Class C is
9 going to be kind of a pressing issue at least for the
10 State of Texas, DOE and the NRC.

11 MR. CAMERON: Okay. Thank you, Brad.
12 Then, Rusty?

13 MR. LUNDBERG: Thank you. I think also,
14 just to add to what Brad said as his preparatory
15 statement, is that I think this is a great cross section
16 for a panel to have this kind of discussion and for the
17 engagement and who's here, both either listening on the
18 phone or here in attendance.

19 I think this is a really great opportunity
20 to fully flesh out a lot of the issues related to kind
21 of this near term horizon view of low-level radioactive
22 waste, the system itself and where it needs to go.

23 A couple of things that I wanted to point
24 out was obviously for us the impact that changes
25 regarding the regulatory structure, for example,

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1 changes in Part 61 and their domino effect on a matter
2 like depleted uranium disposal.

3 I have to bring that up, because that's
4 obviously not only a near-term thing, but I also think
5 it's not just handling the legacy. It's also handling
6 the to be generated or as being generated.

7 The other one I just want to posit it,
8 because I always like to think I'm somewhat innovative,
9 is I do think that there is a potential, given the
10 advancements in technology, that even though nuclear
11 power plant waste generation may not change a lot, I do
12 feel that some of the other areas of radioactive waste
13 use that's licensed out there and the resulting waste
14 forms may have a potential to change because of changes
15 in technology.

16 I think changes, the time horizon for those
17 kinds of changes can be a three, five, ten year kind of
18 horizon. And I do think that we may feel comfortable
19 about it, but we do have this idea that we're pretty
20 confident about the near term waste inventory for
21 low-level. I think it has the potential to change as
22 well within that time horizon.

23 MR. CAMERON: Okay. So the changes in
24 technology could cover a lot of different types of
25 changes --

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1 MR. LUNDBERG: Right.

2 MR. CAMERON: -- disposal technology or
3 the changes in how waste is generated, correct?

4 MR. LUNDBERG: That was actually on the
5 bottom of my list. So I just wanted to capture one that,
6 even though it's a little less of an importance to me,
7 I think it's one that I just wanted to get on the board
8 so it's there.

9 MR. CAMERON: Okay, good. Thanks, Rusty.
10 And Greg, we'll go to Earl, okay. Earl?

11 MR. FORDHAM: Oh, yes you are, Greg. Some
12 of the things that we see on the horizon are a couple
13 of the items that they're currently working on. And
14 that's the BTP.

15 It's kind of near and dear to a site
16 operator's heart. I understand it's coming out later
17 this year. And I understand Jim Kennedy's retirement
18 is based on that. I'm sure he's got an impetus to get
19 that done.

20 Some of the other work, I'd like the
21 technology, because there's a lot of talk around Hanford
22 right now about small modular reactors. And some of the
23 prototypes of that might be in Idaho. So we may see the
24 waste streams from that. And that could be a different
25 ball of worms than the current commercial reactor waste

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1 streams.

2 MR. CAMERON: Okay. Thank you, Earl.
3 Dan?

4 MR. SHRUM: Again, I'd also like to thank
5 the NRC for the opportunity to be part of this panel.
6 Some of the things that we've thought about have already
7 been mentioned.

8 But one that was mentioned briefly by
9 Melanie was that there are several power plants that are
10 ready to be decommissioned. And that will put not just
11 a strain on disposal but also a strain on workers.

12 Are there enough folks in this field that
13 are expert enough to really start taking down all these
14 plants in a timely and efficient manner? We're kind of
15 stressed as it is and strained as it is.

16 And so it's something that our industry,
17 EnergySolutions in particular has always tried to bring
18 up the next generation. And if we start
19 decommissioning these five plants in the next five to
20 seven years, that's going to be a strain on our resources
21 as well as other people's resources.

22 MR. CAMERON: Good, good. Thanks, Dan.
23 Mike?

24 MR. GARNER: Well, I guess I'll kind of
25 build on Ralph's comments. And that is I would

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1 anticipate, with the growing population and to address
2 climate change, there will certainly be a push for
3 additional nuclear utilities in the future.

4 MR. CAMERON: Great. Thanks, Mike. And,
5 Bill?

6 MR. DORNSEIF: Can I add another one?

7 MR. CAMERON: Yes.

8 (Off the record comments)

9 MR. DORNSEIF: You know, now that we, at
10 least from a disposal resource standpoint, don't have
11 any orphan waste, we still don't have "defense in depth"
12 in terms of disposal capacity, okay. If one site were
13 to shut down, we're back in the same ballpark.

14 And my question is, is there anything that
15 we can do as a waste management community to deal with
16 that potential issue? You know, regulators, and
17 disposal site operators and generators working
18 together, how can we help to avoid something like that?

19 MR. CAMERON: So the scarcity in disposal
20 options, okay.

21 MR. DORNSEIF: And, well, really it's how
22 do we deal, you know, with the community --

23 MR. CAMERON: And I think that's an
24 important point that you just emphasized, is dealing
25 with it as a community. Ralph and then Rusty, Ralph?

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1 MR. ANDERSON: Yes. Considering a much
2 longer horizon, one of the things that I see is lacking
3 is a defined gap analysis of the current framework
4 against both current low-level waste disposal needs and
5 future low-level waste disposal needs. You know, where
6 is the framework lacking and where is the framework
7 inefficient or inconsistent?

8 A second item is waste classification
9 tables. My point in the 100 year time horizon is I'd
10 like to think that in 100 years we're not going to be
11 teaching PhD students in health physics how to use
12 ICRP2.

13 I currently do that, by the way. We get
14 graduate students with master's degrees in health
15 physics. And at the reactors, anyway, we have to train
16 them on ICRP2. Because the only place they saw it in
17 graduate school was as part of a history lesson. So
18 there's an inefficiency there.

19 And then thirdly, I'd like to add, in terms
20 of the scope of our thinking, I'm working on some
21 different task groups associated with recovery of the
22 area around Fukushima.

23 I think we ought to be thinking about the
24 NRC Regulatory framework, and the criteria and the
25 underlying technical basis and its relationship to

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1 dealing with waste incidental to a large nuclear event,
2 whether that event be a nuclear accident or whether it
3 be a terrorist event.

4 As we saw at Fukushima, NRC regulations
5 were looked at by the people of Japan as kind of a
6 benchmark on what's safe and what's not safe. So
7 irrespective of who has statutory authority over those
8 things, a certain amount of that thought should go into
9 how NRC conceives future regulations.

10 MR. CAMERON: Okay, okay. Thank you.
11 And Rusty, and then we'll go down to Mike. And then I'll
12 try to sum up some of these. And we'll go and visit each
13 one.

14 MR. LUNDBERG: If I may, I'm going to put
15 on my other hat in terms of representing the Low-Level
16 Waste Forum for just a moment.

17 As noted, we've been working on a specific
18 project under a grant from NNSA to look at disused sealed
19 sources. And I think that some of the things that we
20 have found tentatively under that working group I think
21 fall within this opportunity of a dialogue within this
22 near term horizon.

23 And certainly that's the way I'd couch
24 this, is that in the near term over this three, five or
25 maybe even shorter, obviously, but to look at a dialogue

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1 that would look at some of the gaps that may exit
2 regarding financial assurance.

3 And maybe we should actually say financial
4 responsibility. Because I know there's this linkage
5 sometimes of financial assurance just with
6 decommissioning. And I'm talking about in terms of a
7 licensee having sealed sources no longer in use.

8 But yet, should there be some other
9 financial responsibility for holding them in storage,
10 given that disposition might be a better option for
11 security purposes, but yet economically, it's
12 difficult. But if you incent that process or that
13 thinking in the near term through some other mechanism
14 of storage, it also costs you, kind of thinking.

15 And then second to that, a tracking aspect
16 to maybe enhance or look at opportunities to improve the
17 tracking aspect of sealed sources, again, that might
18 fall into this security matter.

19 MR. CAMERON: Okay. Thanks, Rusty. And
20 Mike?

21 MR. GARNER: Yes. I would just add to, I
22 guess, Bill's comment. It's been 29 years since the
23 Policy Amendments Act was adopted. We've had
24 EnergySolutions, we've had Waste Control Specialists
25 come online.

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1 But I know EnergySolutions has indicated
2 that their current section of land that they use for
3 disposal, they've got 25 to 30 years left. We've got
4 about 40 years left in Richland. It's not too soon to
5 be thinking about how we're going to develop new sites
6 for the future.

7 MR. CAMERON: Okay. I'm going to put that
8 up here with Bill's. And, I mean, I apologize for the
9 fact that my chicken scratch may not be real legible or
10 legible at all, okay. But I know Melanie is capturing
11 this. And I'm just going to go down the list and suggest
12 a topic to start with.

13 But we had changes in technology. An
14 example is small modular reactors over a near term,
15 three to ten year timeframe. Bill Dornsife phrased the
16 generic exemption, giving the example of what's
17 happening in Texas with Waste Control Specialists. And
18 that might have a lot of implications.

19 Recent power plant decommissioning, Dan
20 Shrum talked about that. What are the implications,
21 labor force, resources of disposal facilities?

22 GTCC was mentioned by a number of people.
23 And Christine brought up the new DOE facilities, what
24 are the implications for commercial. Mike, climate
25 change and the resulting perhaps increase in the need

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1 for nuclear power plants.

2 Ralph was concerned we needed a long
3 strategic horizon tied to the new nuclear power plants
4 that are coming on. Rusty talked about, I think he used
5 the term domino effect, okay, the changes in Part 61,
6 and used the example of depleted uranium.

7 Then we came over, and this was first said
8 by Bill Dornsife, as a community how do we deal with the
9 scarcity in disposal sites. Ralph brought up this, we
10 need to do a gap analysis. And I think that, Ralph, the
11 gap analysis could cover a lot of these points.

12 You know, the NRC is working on a strategic
13 assessment. But as you're suggesting, perhaps, one
14 topic on that assessment might be to do a gap analysis.
15 Although whether that's totally within the NRC's
16 regulatory jurisdiction is another question. But
17 someone might do that.

18 Waste classification, waste incidental to
19 large events like Fukushima, as an example, Rusty
20 brought up sealed sources, financial responsibility,
21 tracking.

22 So this is going to be a great discussion,
23 already a lot of good ideas for the NRC to consider here.
24 And I was going to suggest that maybe we start with the
25 GTCC and the new DOE facilities. And I say that,

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1 Christine, you have your tent up. Why don't you tell
2 us what's on your mind. And then maybe we'll move to
3 the discussion of GTCC.

4 MS. GELLES: Thank you, I appreciate it.
5 So Ralph's thought about the gap analysis really
6 resonated with me.

7 And, you know, from the standpoint of waste
8 classification here, as here you wrote it down, is in
9 the context of the waste classification tables, the
10 classes of low-level waste. But more broadly, public
11 perceptions to include their understanding and
12 agreement to broader waste classification questions of
13 what waste is low-level waste, maybe risk informing a
14 definition of what is high-level waste. Because that
15 might have an impact on what is not high-level waste,
16 and therefore is potentially low-level waste.

17 These are matters that I think need to be
18 considered. And I'm wondering, Ralph, if your gap
19 analysis can include those sort of broad, softer human
20 issues.

21 And then related to that, you know, our
22 regulatory structure, the Low-Level Waste Policy Act
23 amendments, it may well need to be revisited because of
24 the developments that are happening in the limited
25 Rulemaking on Part 61.

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1 So I said this a little bit flippantly on
2 a panel during the conference, but in a world where waste
3 classification tables don't exist in 61.55 potentially,
4 the definition of what is Greater Than Class C,
5 low-level waste, I mean, Greater Than Class C ceases to
6 exist if there's not a Class C definition. Because
7 there isn't a table.

8 So I think that we need to be thinking about
9 how there's connections between these issues. And that
10 brings me to Greater Than Class C low-level waste.

11 So Greater Than Class C low-level waste,
12 not in homogenous inventory, you know, we generally
13 break up the inventory amongst activated metals which
14 has by and large the majority of the actual
15 radioactivity of concern.

16 But then there are sealed sources which, in
17 terms of the estimate we have, and it's based on a lot
18 of complicated assumptions, but the estimate we have of
19 what's in storage today or will be generated over the
20 next 30 years from facilities or operations that are in
21 process, sealed sources make up nearly half of that
22 inventory.

23 And while it's a small inventory relative
24 to the volumes that the Department of Energy manages
25 annually, it's less than 6,000 cubic meters, sealed

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1 sources are small. So if they're making up, you know,
2 as much as a half of that, that's a lot of sources.

3 You know, not all sources are small, but
4 many of them are small. And they present that security
5 concern, the non-proliferation, the RDD concerns. So
6 there's got to a driver there for that.

7 And then there's a third category which is
8 everything else, any other radioactive debris or
9 equipment that exceeds Class C levels. I want to
10 clarify that the term Greater Than Class C-like is not
11 a waste classification that the Department of Energy
12 has. It's a descriptive term we used to describe and
13 differentiate the volumes of waste that the Department
14 of Energy was also analyzing in the EIS, but that did
15 not have a disposal pathway.

16 And that included non-defense transuranic
17 waste. So we need to be clear that when we have
18 discussions of could Texas or another Agreement State
19 regulate the disposal of GTCC-like waste, if it's
20 transuranic waste, it has a defined, you know, need for
21 a geologic disposal.

22 We don't dispose of transuranic waste as a
23 matter of practice in near surface disposal facilities
24 at DOE. We send them to WIPP. So the WIPP Land
25 Withdrawal Act, with its defense only designation, is

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1 another one of those statutory constraints that perhaps
2 needs to be revisited in the context of us managing a
3 really fully thought out radioactive waste management
4 program as a Nation that, I think, would be greatly
5 informed by a gap analysis such as the one that Ralph
6 described.

7 MR. CAMERON: So a lot of things could fit
8 under the gap analysis. And, I guess, one question for
9 all of you to think about, and we're going to go to Bill
10 and see what Greg wants to add, is that how much of a
11 starting point on a gap analysis could the DOE, FEIS fill
12 in terms of providing this information?

13 MS. GELLES: I mean, I think it's an
14 important part of a gap analysis. I don't know if it's
15 even a quarter of what needs to be addressed. But it's
16 an important part, because it brings with it many of
17 these softer human issues that we're talking about.

18 So given that there's some heterogeneity
19 amongst the GTCC inventory, our analysis, you know, was
20 conducted in a hybrid, sort of a multi-dimensional
21 level. So we provided for the possibility of multiple
22 solutions.

23 Maybe there's a different disposal
24 recommendation for different sub-sets of the GTCC
25 waste. And while our draft DIS did not contain a

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1 preferred alternative, our final will. But the
2 viability of finding those details within the preferred
3 alternative is challenging for us for many reasons
4 having to do with public acceptance and eventual impacts
5 on commercial markets.

6 So we are not certain when we're going to
7 produce the GTCC EIS in its final form. We're actively
8 working on it. We're actively thinking about it.

9 But, I guess, what I'm saying is there are
10 some human factors that are affecting the ultimate
11 recommendation where the technical analysis is very
12 clear. Near surface disposal could be protective for
13 GTCC waste.

14 MR. CAMERON: Okay. Good, that's a good
15 start to a discussion of GTCC. And I think that we're
16 going to always have this underlying concept here
17 running underneath all this discussion of the gap
18 analysis. So I think you should always keep that in
19 mind. That may be an organizing framework for all of
20 this.

21 And just a second point is that second
22 bullet up there which should remain on the list and how
23 they should be prioritized. I think we may be morphing
24 that into this discussion also. So keep that in mind.

25 And, Greg, did you have a clarification you

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1 wanted to put before we go to Bill and Dan?

2 MR. SUBER: Yes, yes. Actually I did.
3 When you talk about a gap analysis, I know we've done
4 gap analysis in the past. In fact, when we were looking
5 at reprocessing Rulemaking, we performed a gap analysis
6 to see what our current regulatory framework called out
7 and what types of waste would lie outside of that
8 framework.

9 Therefore, we would need additional
10 regulations to find a home so that wouldn't be orphan
11 waste that we were producing during the reprocessing
12 cycle.

13 In addition, we have started doing a gap
14 analysis for GTCC. The challenge of course is, you
15 know, GTCC has no ceiling and Class A has no floor. So
16 it's a wide variety of things that could go in.

17 And you talked about the heterogeneity of
18 the waste itself. So can you help me understand a
19 little better whether you're talking about a technical
20 or regulatory gap analysis or both? And what would be
21 helpful, and what type of analysis would be most useful?

22 MR. CAMERON: Okay. And let's hold that
23 thought. I mean, that's a great question. And we'll
24 put that in the parking lot for an example. I mean, you
25 know, I think the gap analysis is something that's

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1 resonating with a lot of people. But what role would
2 the NRC play in doing a gap analysis. And if you're
3 doing that, where is that on your strategic assessment?

4 But let's go to Bill. We're talking about
5 GTCC. Bill? And then we'll go over to Dan. Bill?

6 MR. DORNSIFE: Well, I think the most
7 immediate issue in GTCC is the proper interpretation of
8 the Federal law licensed by NRC. What does it mean in
9 terms of Agreement States?

10 I mean, typically when the words are
11 licensed under the authority of the NRC, that includes
12 Agreement States. Because that's a transfer of
13 authority. So I think that's the most immediate thing.
14 Because that will help DOE clear up the issues involved
15 with their final impact statement and also help the
16 state regulators to understand where they are.

17 The second issue, I think, a little bit
18 longer term but still very important is what entity is
19 going to own and be financially responsible for the
20 disposal of GTCC?

21 MR. CAMERON: Let's hear from Dan, and then
22 we'll go back over to Ralph. But Bill just put a couple
23 of things on the table for the Agreement State issue that
24 came up before and who's going to be the organization
25 ultimately responsible for disposal. So anybody on the

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1 panel has some perspectives on that, let's hear those
2 too. Dan?

3 MR. SHRUM: With respect to GTCC, and since
4 I'm a very rule driven individual, I just want to be
5 clear, Chip, that I think it's pretty clear that we want
6 to move this from a medium to a high on the list. And
7 you said that we're kind of creeping into two.

8 My question is really for Christine. Is
9 the DOE ready for this? Is it time to move this from
10 a medium to a high? Because it really falls within
11 their jurisdiction. And you're working on the EIS. Is
12 it time to move this to a high?

13 MS. GELLES: It's my opinion, my personal
14 opinion, that the strategic item that was listed as a
15 medium is not what needs to move forward. Because it's
16 going to be overtaken by the changes to Part 61. What
17 needs to move forward is the clarification that Bill
18 just described.

19 MR. SUBER: Okay.

20 MS. GELLES: It's a regulatory licensing
21 clarification. It's not developing new regulations
22 for GTCC disposal that define a depth, or a degree of
23 engineered barriers or a type of disposal facility.
24 And it gets, fundamentally, I think to the language in
25 the act that it's a facility licensed by the NRC presumed

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1 that it was going to be a geologic disposal facility,
2 much like the high-level waste disposal facility is to
3 be licensed by the NRC.

4 And the answer to your question is the same
5 as for high-level waste. It is a Department of Energy
6 Federal responsibility to site and fund that disposal
7 facility, both the high-level waste one and the Greater
8 Than Class C low-level waste one.

9 But given that our analysis now has
10 informed our opinion that near-surface disposal can be
11 acceptable for at least some of the GTCC population, we
12 believe that the appropriate place for that is in Part
13 61. And if you change Part 61, you don't need new rules.
14 That's my personal opinion.

15 MR. CAMERON: I'm sorry, Christine, could
16 you just repeat the last thing that you said?

17 MS. GELLES: If you go to site specific
18 performance assessment in Part 61, as seems to be the
19 way that we're going, you don't necessarily, and again
20 not withstanding an outstanding question about what
21 happens with waste classification tables, you do not
22 need to promulgate specific regulations for the
23 disposal of GTCC low-level waste if a site specific PA
24 would demonstrate it can be accepted.

25 MR. DORNSIFE: But my issue, Christine,

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1 when Brad brought up the ownership and financial
2 responsibility, was for us, obviously, which cell would
3 it have to go in in terms of who owns it. And secondly,
4 who would pay for it? It's not who would finance the
5 disposal facility. It's the waste itself.

6 MS. GELLES: Okay. I also believe that
7 the act is clear on that and that the generators have
8 to bear financial responsibility for the cost of their
9 waste being disposed.

10 So one of the reporting requirements we
11 have, and it's long been in existence, since '85, is to
12 provide Congress with information on what would be the
13 cost of pricing structure for GTCC disposal so that it
14 could be, they can evaluate it, and it's a reasonable
15 cost recovery process.

16 MR. CAMERON: Okay. And we're going to
17 hear a comment from Dave Esh in a minute on this and
18 perhaps Larry Camper. But Dan asked Christine a
19 question about is it time to move GTCC to a high
20 priority.

21 And I think Christine's answer was yes, but
22 not from the perspective, I think that what you said,
23 my interpretation of where it is on the medium priority
24 list is now passé. And even though it might be high
25 priority, it has to be looked at through a different

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1 lens.

2 MS. GELLES: Yes.

3 MR. CAMERON: Okay. All right. David?

4 DR. ESH: I just wanted to clarify that I
5 believe if you look at the existing regulations the
6 requirements apply to the, the technical requirements
7 in there apply to the near surface disposal of
8 radioactive waste which is defined as the upper 30
9 meters. So depending on the disposal alternative,
10 there may, in fact, be a need to produce requirements,
11 technical requirements suitable to analyze the other
12 situation.

13 MR. DORNSIFE: Well, let me ask a silly
14 question then. If the disposal cell is deeper than 30
15 meters --

16 MR. CAMERON: Bill, you're going to have to
17 --

18 MR. DORNSIFE: If a disposal cell is deeper
19 than 30 meters, is it still shallow land disposal? I
20 mean, the bottom of our cells is deeper than 30 meters.

21 MR. CAMERON: Okay. And again, I think we
22 just need to keep in mind here what we're trying to do
23 is to identify areas that should be on a higher priority
24 or a lower priority in terms of the NRC's strategic
25 assessment. So we may not be treating this as a seminar

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1 on everything about GTCC, okay. If I got that acronym
2 correct.

3 MR. SUBER: Can Christine just clarify a
4 little bit more what she meant when she said, she said
5 something very different. She said that the way GTCC
6 is explained in our chart is not the question that the
7 NRC should be addressing. If she could just go into a
8 little bit more depth about what she thinks we should
9 actually be looking at right now.

10 MR. CAMERON: And Greg, that's I think the
11 premier question. If you wouldn't mind just --

12 MS. GELLES: You bet.

13 MR. CAMERON: -- talking about --

14 MS. GELLES: And I'm sorry I didn't have
15 the exact wording in front of me when I was making that
16 comment. So in the list of medium priority activities,
17 developing licensing criteria for Greater Than Class C,
18 GTCC, disposal facility.

19 My point is I don't think it's time to move
20 forward on that specific action in front of Part 61 being
21 revised or in front of this question of can an Agreement
22 State regulate a facility that accepts any commercial
23 GTCC waste.

24 And, I mean, I agree with what they've said.
25 Depending on what, getting back to my heterogeneity

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1 point, depending on what the preferred alternative or
2 chosen disposition facility is, disposal facility
3 design is for each of the subsets of Greater Than Class
4 C low-level waste, if some of that GTCC population is
5 going to a facility that's not addressed by Part 61, then
6 perhaps there would be some need for licensing criteria.

7 But until such time that we complete the
8 EIS, provide a report to Congress and receive their
9 direction on how to proceed, I think proceeding with
10 developing a single set of licensing criteria is
11 premature.

12 MR. CAMERON: Okay. And I think that's a
13 pretty good expression of what you wanted to hear --

14 MR. SUBER: Yes, it is.

15 MR. CAMERON: -- Greg. And let me go to
16 the name tents that are up on this issue. And let me
17 make sure that the NRC understands the point. Because
18 it goes directly to the strategic assessment point.

19 Larry, I'm coming back to you. I'm coming
20 back to you. I want to go to, we'll go to Ralph, and
21 then Rusty and then Earl. And then we'll get a point
22 from Larry.

23 MR. ANDERSON: I hate to do it this way.
24 I'd like to hear what Larry was going to say. Because
25 I have a hunch it's relevant to --

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1 MR. CAMERON: Okay. Well, good. Larry?

2 MR. CAMPER: Thank you, Ralph, for that
3 deference. The facilitator didn't do that.

4 (Laughter)

5 (Off the record comments)

6 MR. CAMPER: That's right. The point I
7 wanted to make is, when we talk about the GTCC issue,
8 there are two camps of logic that you've got to think
9 about. One is the legal policy question.

10 And I mentioned earlier that we want to meet
11 with DOE soon about this. But based on our discussions
12 with the Office of General Counsel, it's pretty clear
13 that our view is that's an assigned Federal
14 responsibility as specifically articulated in the
15 Low-level Waste Policy Act of '85 as amended.

16 However, having said that though, it's also
17 very clear that the Commission, when it created
18 61.55(a)(2)(iv), recognized a number of things, not
19 exclusive Federal ownership of a site, the role of the
20 Agreement States, something other than a deep geologic
21 disposal.

22 So what we've got to do is work our way
23 through that legal policy question. But a subset of
24 that legal policy question is that if you look in Part
25 61 right now, recognize that Greater Than Class C waste

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1 is specifically articulated is not suitable for near
2 surface disposal.

3 Now that raises an intriguing question.
4 Because Christine is right. We've got this ongoing
5 Rulemaking that focuses upon the role of a site specific
6 performance assessment for near surface disposal.

7 MR. DORNSIFE: Which specifically says it
8 could include Greater Than Class C.

9 MR. CAMPER: But it's also defined as
10 within 30 meters. So what do we do about that policy
11 issue as well? And then the other side of the
12 consideration is, even if you assume that a low-level
13 waste specific site assessment could encompass GTCC
14 waste, are there any minimalistic technical criteria
15 that should be articulated for inclusion within that
16 site specific performance assessment? Are there?

17 I'm not sitting here, you know, pre-judging
18 that there are. But it's a question we're going to have
19 to run to ground. So the point I want to make is we do
20 want to have a separate workshop probably later this
21 year, this summer or early fall, around GTCC.

22 And in the meantime, we'll be running to
23 ground these legal policy questions so we can speak to
24 that. And then we'll focus upon the technical
25 criteria, whatever it is and if there should be some.

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1 So just wanted to give you that waterfront (phonetic)
2 to think about.

3 MR. CAMERON: Okay. Thanks, Larry. And
4 given, I think, that's a nice segway about the workshop,
5 because I think that what we need to do is what I want
6 to do, is to go to Brad, and Rusty and Earl on GTCC. And
7 then I think we need to go to the next issue at this
8 point. And I'm sorry, not Brad, Ralph, Ralph, and Rusty
9 and Earl. So go ahead. And did Larry --

10 MR. BROUSSARD: And Larry's sitting close.

11 MR. CAMERON: Did Larry --

12 (Off the record comments)

13 MR. ANDERSON: But I'm glad I did defer to
14 Larry. And that was the point I wanted to make. It
15 seems to me that looking at these issues too much in a
16 vacuum, and looking at them as though they were stand
17 alone issues, is part of the reason why I think we need,
18 for want of a better name, a gap analysis.

19 I've been intrigued over the years, dating
20 back to when the concept of Greater Than Class C was
21 invented, of how the terms that are used have become
22 irrelevant.

23 The quantitative definition of Greater
24 Than Class C as embodied in legislation, to quote one
25 of our colleagues from earlier, doesn't reflect the

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1 state-of-the-art and doesn't really reflect our current
2 understanding of adequate protection of health and
3 safety which is the NRC's primary mission.

4 Over time, that quantitative definition
5 has moved away from a direct relationship to our
6 understanding of protection of health and safety. And
7 let me say, I think it's thoroughly protective, it's
8 just that it may be protective by orders of magnitude
9 now in some cases.

10 And then secondly, I'm intrigued by how
11 Greater Than Class C illustrates how unclear the thought
12 of unsuitable for shallow land disposal has come. I'd
13 like to think that many, many years ago we kind of knew
14 what that meant.

15 But I'll just tell you that the model we
16 were looking at was represented by the sites that were
17 in existence at that time, not the sites that were being
18 envisioned for the future. And some of them aren't in
19 operation anymore for good reason.

20 So, you know, I'd just comment that even
21 that concept of not suitable for shallow land disposal
22 kind of begs the question of what do you mean by shallow
23 land disposal?

24 And I point to Bill's comment that, you
25 know, I don't think Texas as it sits today is what we

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1 had in mind when we were inventing all these terms and
2 these laws. You know, I'd look at the site down there,
3 and I'd say, well, that isn't anything like the picture
4 that we had in our heads in those days.

5 So the only point I wanted to make about
6 that is taking Greater Than Class C, I think, is an
7 excellent example for NRC to take on for several
8 reasons.

9 One is dealing with the issue of not having
10 state-of-the-art understandings embedded in the issue.
11 Two is a revisiting of the correlation of reasonable
12 assurance and adequate protection of health and safety
13 versus the costs that are going to be incurred.
14 Because, frankly, the nuclear power industry and its
15 consumers of electricity are going to pay for it one way
16 or the other.

17 And then thirdly, is the notion of how it
18 crosses party lines in a way that NRC can't make its
19 decisions in a vacuum in terms of its colleague, sister
20 agency, Department of Energy.

21 The Environmental Protection Agency, who
22 is out working on a new 40 CFR 190 right now, even though
23 it's not specifically focused on waste disposal, it's
24 going to beg questions. So I just think it's the right
25 issue for NRC to think about in terms of reformatting

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1 how it would do the next strategic assessment.

2 MR. CAMERON: Okay. I mean, it sounds
3 like some of the things that you and others are saying,
4 is that there's a new paradigm now, okay, that, you know,
5 that's good. Rusty, and then Earl, and then let's see
6 what our next topic is. Rusty?

7 MR. LUNDBERG: Okay, thank you. I think
8 that segways exactly to what I wanted to add here too.
9 If this is a paradigm shift or a moving away from a more
10 traditional view of the framework for low-level waste,
11 I think that it's appropriate to also posit right now
12 the opportunity to look at how you want to engage the
13 public in outreach and education about this kind of a
14 shift as well.

15 Because some of the issues that are raised
16 here about perhaps it is suitable for near surface
17 disposal is one that will take some opportunity for
18 education.

19 I'm not saying that's supportive. But I'm
20 just saying that I think a component of this is that with
21 a significant shift like this you have to also add in
22 the idea of engaging the public enough to inform them.

23 MR. CAMERON: Good, good. Thank you,
24 Rusty. And Earl?

25 MR. FORDHAM: I'd like to take a little bit

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1 further down what Larry had said is, you know, the
2 shallow land barrier acceptance of, you know, Class A,
3 B and C, all this is going to be based on a performance
4 assessment that each site runs.

5 Just down the road from me is a Department
6 of Energy facility that can take Class B, in my world,
7 it would be Class B unpackaged cesium because of their
8 site specific performance assessment.

9 Along that same idea though is they do have
10 a performance assessment that will indicate some level
11 that is the upper limit. Now, you will set an activity
12 limit for maybe more than just the standard isotopes
13 that we have in 61.55 right now, or it may actually
14 reduce it.

15 It would be up to each individual site as
16 they run through the performance assessment. But
17 you're always going to end up with, it may not be called
18 GTCC, but it's going to be called unacceptable for, you
19 know, near surface burial. And we can redefine that
20 somehow.

21 MR. CAMERON: Okay. Thanks, Earl. So
22 there's a lot of great conversation about GTCC. And gap
23 analysis has been mentioned several times to address a
24 number of issues.

25 There were a number of topics brought up

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1 that relate to changes in technology with the
2 implications that are the longer horizon in terms of the
3 new plants that are being built, the point that Dan
4 raised about more plants being decommissioned, Mike's
5 comment about climate change.

6 Where do we want to go next in looking? It
7 seems to me that a number of those topics might be lumped
8 under a single discussion. But I don't want to forget
9 Christine's point about new DOE construction. Should
10 we just, can we go there?

11 MS. GELLES: Yes.

12 MR. CAMERON: Okay.

13 MS. GELLES: And perhaps this one can be
14 dealt with very quickly. I just wanted to acknowledge
15 that DOE is contemplating the development through a
16 regulatory decision making process of three new, what
17 we would call CERCLA disposal facilities to support the
18 large facility decommissioning efforts that are going
19 to take place at Paducah and at Portsmouth from the
20 former gas use diffusion plants.

21 But also a replacement, a second CERCLA
22 disposal facility at the Oak Ridge Reservation is to
23 support continued D&D of the nuclear facilities that are
24 at that reservation, whether it's from the Y-12 facility
25 which is run by NNSA, Oak Ridge National Laboratory or

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1 the completion of ETTP which was the first gas use
2 diffusion plant for us to D&D.

3 And the practical implications of creating
4 these large facilities for the receipt of large volumes
5 of construction or of contaminated facility debris or
6 contaminated soils, as a result, takes that out of the
7 market of going to either one of our DOE regional
8 disposal facilities, the Federal waste disposal
9 facility, Waste Control Specialists or Clive. As well
10 as, if there was only some slightly contaminated, what
11 could go to the exempt facilities or the permitted
12 facilities that aren't licensed?

13 So it's going to have an impact on the DOE
14 wastes that are received in commercial facilities which
15 could have an impact on the market and, I don't know,
16 maybe the operability and financial decisions of those
17 facilities.

18 MR. CAMERON: Okay. Let's pull that
19 thread that Christine just raised then, the
20 implications for commercial disposal. And, Ralph, is
21 that something you wanted to talk to? Let's go to Ralph
22 and then Bill.

23 MR. ANDERSON: Yes, just a simple comment.
24 You had listed a number of things and talked about
25 lumping together. And this is kind of driven by

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1 Christine's comments.

2 Something I've been used to over the years,
3 whenever we've done strategic planning, is that you lay
4 out scenarios for planning purposes in which you
5 describe sort of an expected case scenario.

6 And then you develop a high impacting
7 scenario and then a low impacting scenario. And in
8 doing strategic planning, then you can prioritize, and
9 then you give thought to what would be the implications
10 if things went differently.

11 And it seems to me that's one way to kind
12 of lump those things together is for NRC to consider
13 postulating some scenarios when they get into this
14 process of public engagement and stakeholder engagement
15 for the strategic assessment.

16 It can be helpful to say, in our primary
17 thinking, imagine that it's going to go like this in the
18 low-level waste arena. It could go like that, and that
19 has specific implications. Then it could quick go like
20 something else, and that has specific implications.

21 And that may be something that's lacking in
22 trying to get our hands around the implications of some
23 of these issues we have on our list, including what
24 Christine referred to.

25 MR. CAMERON: Okay. Let's -- Christine?

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1 MS. GELLES: I think Ralph, he's on to
2 something there. So a few of the other ones that were
3 listed was maybe it's time to start thinking about the
4 next facilities, the next disposal facilities, having
5 a longer time planning horizon for the Strategic
6 Assessment.

7 If we are unable to obtain regulatory
8 approval to site one or more of those new CERCLA disposal
9 facilities then there will be large volumes that will
10 go offsite, and whether they go to a DOE disposal
11 facility could be a function of political
12 acceptability, it could also be a cost decision of
13 whether it goes to a commercial facility and that could
14 accelerate the use of the available capacities at those
15 facilities as well.

16 MR. CAMERON: And before we, and I'm glad
17 Greg has his card up, but before we go to Bill I guess
18 that one of the things I'm hearing and I need to check
19 in with the NRC on this is that this is sounding much
20 like strategic assessment for low-level waste disposal.

21 Generally, things that might go outside of
22 the NRC's Strategic Assessment, okay, that doesn't mean
23 that it wouldn't be useful for the NRC to be the laboring
24 oar, so to speak, to do those things, but, Ralph, in
25 terms of that process you just talked about I just want

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1 to be clear on how that relates to the gap analysis that
2 we've been talking about?

3 In other words, could that be the same
4 thing?

5 MR. ANDERSON: I think it could be. I mean
6 both would seem integral to kind of a first stage of
7 strategic planning. A comment I would make though is
8 that even in the context of NRC's mission of adequate
9 protection of health and safety it seems to me that it's
10 very far ranging in that NRC's obligation is to assure
11 that all bases are covered in terms of adequate
12 protection of health and safety.

13 And so I don't think it's NRC moving out of
14 its scope to recognize where it needs additional input
15 and information to make narrow decisions within the
16 context of regulation for public health and safety
17 purposes.

18 You know, it's not that NRC isn't going to
19 move out into those spaces and try to influence that,
20 it's rather that NRC needs to take into consideration
21 the adequacy of its regulations for its fundamental
22 mission.

23 MR. CAMERON: So all of this could be tied
24 to that --

25 MR. ANDERSON: Yes.

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1 MR. CAMERON: -- because all of them might
2 have implications for DOE's mission. Bill, let's hear
3 from you and then we'll go to Greg and ask Greg and Larry
4 some questions here. Bill?

5 MR. DORNSIFE: Yes, I have no problem with
6 the DOE using cost-effective waste disposal solutions
7 because it saves taxpayer dollars. The problem I have
8 is how you define what's cost effective.

9 It's not a level playing field. You need
10 to include complete life cycle costs of disposal, not
11 just, you know, the operational cost when you're
12 comparing options, and I think the commercial folks
13 would be very happy if that playing field were level and
14 we were fairly competing.

15 MR. CAMERON: Okay. Thank you, Bill.
16 And, Greg, you've been listening to this discussion and
17 it's a, you know, a broad idea of strategic assessment
18 and I think people think that it's within NRC's scope
19 to do something like this.

20 And, you know, I know Melanie is listening
21 to all of this and she's sort of the point person on
22 strategic assessment, but I think you're hearing some
23 things that might lead you to maybe take a different
24 vision of strategic assessment. But what do you want
25 to say about these things?

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1 MR. SUBER: Well I just want to get a kind
2 of a better understanding of what we can do and as a
3 Segway, I'll make a statement. When we first embarked
4 on the Rulemaking, which started off as a unique, the
5 DU Rulemaking, a unique waste streams Rulemaking, and
6 now it's the site-specific analysis Rulemaking.

7 One thing that we tried to do, and I don't
8 know if we succeeded, we tried to revise the rule in a
9 forward thinking way. What I'm trying to say is we
10 tried to revise the rule not just to apply to existing
11 facilities.

12 As we gathered the information for the rule
13 we understood a lot of things. Number one, we
14 understood that our current practices were very
15 different than what was envisioned when the rule was
16 made.

17 We realized that there were technology
18 improvements, so on and so forth. And so we tried to
19 incorporate that thinking into the rule and that's why
20 in a lot of places in a rule we try to incorporate maximum
21 flexibility.

22 Maximum flexibility for whether it would be
23 an Agreement State regulator, or the NRC who is
24 approving the rule. So if I could get some more
25 specific examples of what particular parts of the rule

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1 as it is proposed, would not address the fact that the
2 DOE may make a decision to use a commercial facility and
3 that another commercial facility may come up on the
4 horizon.

5 What part of the rule that we are proposing
6 would hamper that or what are we missing? Do we have
7 a blind spot that we didn't consider when we did the
8 site-specific analyses Rulemaking?

9 MR. CAMERON: And let me re-frame that a
10 little bit. You heard what Greg asked and I just, in
11 listening to this conversation, are there suggestions
12 that perhaps the focus on the rule is perhaps too narrow
13 at this point that it shouldn't be the driver?

14 I mean I don't -- I'm just trying to get a
15 clarification on that part. Christine?

16 MS. GELLES: Well first, Greg, I thought I
17 did not have an answer to your question but then I was
18 thinking about this and I think maybe if I draw a
19 corollary to the DOE's Radioactive Waste Management
20 Policy and the way we define waste classes, and it's
21 high-level waste, transuranic waste, low-level waste.

22 So we have been long doing site-specific
23 performance assessments to inform the development of
24 waste acceptance criteria for each of our DOE low-level
25 waste disposal facilities and the WAC for those

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1 facilities differ depending upon the hydrology and
2 geology and the design of those specific facilities, but
3 they're performance based.

4 Now if we receive a low-level waste stream
5 at a DOE facility we're not giving it, generally, with
6 very few exceptions, any consideration of how it would
7 be classified within Part 61.

8 So I think the potential blind spot is if
9 you're moving Part 61 to site-specific performance
10 assessments you no longer have a need to classify A, B,
11 C or GTCC. And the moment you realize that you realize
12 that we've impacted a clear definition of what the
13 Federal responsibilities are for the Department of
14 Energy in siting a GTCC disposal facility.

15 So the blind spot is thinking through the
16 implications of State and Federal responsibilities for
17 a category of waste that for all practical purposes will
18 cease to exist because the site-specific PAs, as Earl
19 said, are going to change, it's going to drive that.

20 Is that clear? I'm not certain I'm
21 articulating it as clearly as I want to, but --

22 MR. SUBER: Yes, I understand that one of
23 the first things you have to do when you're shipping
24 waste for disposal is you have to classify it. And what
25 you're saying is that if you have a WAC that already says

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1 this particular sealed source can be adequately
2 disposed of at my site then what relevance is that
3 classification, whether it's GTCC, Class C, Class B.
4 Am I -- Okay.

5 MS. GELLES: Let me be more direct.

6 MR. SUBER: Okay.

7 MS. GELLES: It gets to the issue of what
8 is a Federal waste under the definition of the Low-Level
9 Waste Policy Act. So DOE is responsible for waste
10 generated by the Department of Energy, well we're AEC
11 and, you know, the predecessor agencies.

12 We're responsible for providing disposal
13 of waste generated through the decommissioning of the
14 nuclear submarines of the Navy and for classified waste
15 associated with the production of atomic weapons, that
16 could be classified from the Department of Defense.

17 That means if they can't go anywhere else
18 we have to provide for their disposal, it's a Federal
19 waste. Those are the three, Paragraph A, B, and C, that
20 are acceptable for disposal at the WCS Federal Waste
21 Disposal Facility because they're a DOE responsibility.

22 So the only people who can get waste into
23 that Fed Cell are the Department of Energy, even if it
24 comes from one of those other Federal agencies, but it's
25 because it's a DOE responsibility to provide disposal.

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1 The same exists, I believe, now we, DOE,
2 also use commercial facilities for the DOE generated
3 waste. If we send a low-level waste item to a DOE
4 disposal facility it's low-level waste and it meets our
5 performance assessment.

6 We run, you know, we evaluate it against the
7 WAC. If it triggers some limit in the WAC we do a
8 special analysis to prove to ourselves that it can
9 safely be disposed, that happens day in and day out at
10 the Nevada National Security Site Disposal Facility.

11 It happens at Hanford for Hanford generated
12 waste. It happens at Savannah River for Savannah River
13 generated waste. But if I take that same waste and make
14 a cost-effective decision to send it to WCS, now I have
15 to apply the Part 61 tables, the 61.55 tables.

16 And if it exceeds Class C it can't go to
17 their cell today. But my point is, is if you adopt a
18 site-specific performance assessment based on Part 61
19 that changes, unless you're still limiting it.

20 So I mean if their facility is robust enough
21 to take Greater Than Class C low-level waste because
22 their site-specific PA says they can then, you know, is
23 that going to be consistent with the revision of Part
24 61 or not because what really they would be taking is
25 Greater Than Class C low-level waste?

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1 MR. CAMERON: Okay. And I'm going to go to
2 Bill and then let me check in with anybody, I see -- Yes,
3 I saw Ralph and I saw Earl shaking their heads in
4 agreement when Christine was talking.

5 Let's see if anybody wants to say anything
6 on this and then I'll make sure that Larry understands
7 this, see what he has to say about it and then maybe move
8 on to a new topic, changes and technology, because we
9 do have the public that we have to hear from on all of
10 this fascinating discussion. Bill?

11 MR. DORNSIFE: I totally agree with you,
12 Christine, when it concerns Federal DOE owned waste.
13 The issue is with the commercial waste and the
14 definition in the Federal law that could create, having
15 two different classification systems could create
16 orphan waste.

17 MR. CAMERON: Okay. Larry, I know you
18 were out for a little bit, but, you know, have you heard
19 this discussion in terms of a new paradigm, the
20 strategic assessment look at a broad range of issues in
21 terms of low-level waste and how that might have
22 implications for what the NRC does, I mean what's your
23 perspective on this?

24 MR. CAMPER: Well there are several things
25 that come to mind listening to this discussion. First,

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1 from a purely management operational perspective if you
2 will, I mean what we're interested in in our update of
3 the LLW SA is those things that are currently under NRC's
4 regulatory purview as clearly articulated by law.

5 And one of those things that, you know, like
6 the list that you saw in Melanie's presentation, what
7 are those things, how should they be re-stacked and the
8 pecking order, or are there other things, and it's
9 purely operational.

10 The idea that looking at low-level waste
11 disposal in the United States from a larger strategic
12 vantage point if you will, certainly makes a lot of
13 sense.

14 You know, Ralph refers to it as a gap
15 analysis, Christine refers to certain developments that
16 might take place in DOE, and I think there is value in
17 doing that and I think the NRC could play a role in it.

18 I'm not certain that we're supposed to lead
19 that given our charge to protect public health and
20 safety, depending how you want to interpret that, Ralph.

21 But the other thing is around this
22 classification discussion just remember though what the
23 Commission has directed the staff to do at this point
24 in time is to add an "or" pathway.

25 There is no elimination of the

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1 classification table as currently directed by the
2 Commission, rather it's to add an "or" pathway using the
3 WAC and that's the charge the staff is working toward.

4 Now the classification system in and of
5 itself has a long standing history of utility in the
6 United States. It's clearly well established, it's
7 embodied within a number of laws, Federal and State,
8 that would have to be changed or impacted in some fashion
9 if the classification system were to not exist.

10 So that's a much broader issue than what we
11 have on our plate at this point in time. I would say
12 though that the kinds of comments that I'm hearing about
13 the role of the Waste Classification System are the
14 kinds of comments that are prime time for the public
15 comment period around the Rulemaking.

16 MR. CAMERON: Okay, thank you. And I know
17 that one of Larry's staff wants to add some
18 clarifications on Larry's comment and we'll get to you,
19 Bobby.

20 MR. SHRUM: No, that's fine.

21 MR. CAMERON: I want to hear -- Pardon me?

22 MR. SHRUM: That's fine. Do you want to
23 have Chris talk, is that who you meant?

24 MR. CAMERON: No, no, Bobby wanted to say
25 something.

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1 MR. SHRUM: Oh, okay.

2 MR. CAMERON: But I wanted to go to you
3 first.

4 MR. SHRUM: Well I just wanted to go on.

5 MR. CAMERON: To another topic?

6 MR. SHRUM: Yes.

7 (Laughter)

8 MR. CAMERON: I think that's probably an
9 excellent suggestion.

10 MR. SHRUM: Because it appears that we're
11 still talking GTCC. It -- I think that --

12 MR. CAMERON: No. I think we're --

13 MR. SHRUM: -- it actually came back to
14 that so I just would like to --

15 MR. CAMERON: Yes. Okay.

16 MR. SHRUM: It was (inaudible) limit.

17 MR. CAMERON: Bobby, did you have a quick
18 clarification you wanted to offer and then we're going
19 to go on.

20 (Crosstalk)

21 MR. EID: Well my name is Bobby Eid, I'm with
22 the U.S. NRC and I work with Larry. I just wanted to
23 make a clarification. There was a question about the
24 30 meters and why 30 meters. Bill, he mentioned that
25 and why not cannot be more than 30 meters.

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1 I just wanted to mention that under NRC
2 regulations in the definition of 61.2, the definition,
3 defines near surface disposal as a facility with land
4 disposal in which radioactive waste is disposed of in
5 or within the upper 30 meters.

6 So 30 meters is mentioned in NRC
7 regulations, that's number one. Number two, I wanted
8 to clarify that there was a question about what can be
9 disposed at different depths. There is under 61.51,
10 sorry 50, Paragraph B, it says "disposal sites with the
11 regulatory requirement for land disposal other than
12 near surface."

13 This means we can accommodate according to
14 the regulation already accommodated under Paragraph B
15 for disposal not near surface as defined 30 meters. It
16 can be accommodated, but needs to be explained, but this
17 is reserved, so this needs further explanation and
18 that's the point I would like to make about 30 meters.

19 MR. CAMERON: Thank you very much, Bobby.
20 And at least in my view I think if -- You've raised a
21 number of points about Greater Than Class C, you talked
22 about a process, what I call a process point in terms
23 of what the Strategic Assessment/gap analysis should be
24 looking at, but I think it's a little bit broader than
25 the NRC's current vision.

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1 And so now we're going to go to a new topic
2 and I was going to suggest the changes in technology.
3 Is that a good one to look at this point? Rusty, do you
4 want to just tee that up for us and we'll talk about that
5 and then we'll go on to some other topics?

6 MR. LUNDBERG: Okay, thank you. It's
7 probably a fairly easy one. When I made my statement
8 I did say that there's likely not going to be a real
9 impact from the nuclear power industry.

10 I did that in context of knowing that there
11 are other designs for modular reactors out there and
12 that could offer something. What I was trying to get
13 to is that was the traditional view, I was trying to
14 infuse a little bit, if we're trying to look on this time
15 horizon maybe broadening our view and thinking a little
16 outside the box might say that there could be advances
17 in technology and such that I'm not talking about really
18 changes in the radionuclides that we're dealing with,
19 it might be the waste form that we're dealing with, a
20 little bit more on some of those changes and will those
21 waste forms because of those technological changes
22 impact the traditional way of looking at final
23 disposition.

24 MR. CAMERON: Okay. Let's talk about that
25 and I guess the first question that I think might be

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1 asked of the NRC is, is that type of change in
2 technology, is that now considered in either the high,
3 medium, or low priority, or is this a new thing?

4 MR. SUBER: It sounds to me, and I guess
5 Chris could probably, just a better -- It sounds to me
6 that this is kind of new. It sounds kind of like a
7 variation of some of the things that we are already doing
8 in a WIR Program where we're looking at waste in
9 different forms and trying to figure out what's the best
10 form for disposals.

11 DOE has several types of techniques they
12 use in creating a particular waste form and we examine
13 that, but that's, I think, is that similar to the
14 technology variations that you're talking about? And
15 Chris could --

16 MR. CAMERON: Chris, please. Introduce
17 yourself, too, (inaudible).

18 MR. MCKENNEY: Chris McKenney, NRC.
19 Before we went into a maintenance mode we used to in the
20 '90s do a lot of waste form analysis through technical
21 papers for the actual evaluation of specific waste
22 forms.

23 They all had to be approved by the NRC
24 before a reactor could use a certain concrete or use
25 bitumen, or whatever process for waste form. But as

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1 part of when we went into maintenance mode we provided
2 that to allow the States to use that on the, for their
3 own, for the disposal sites and we had stopped doing
4 those sort of technical documents.

5 So, Rusty, are you suggesting something
6 around that type of thing where we used to do that and
7 whether we should re-evaluate to the degree that NRC's
8 involved versus the Agreement States or something else?

9 MR. LUNDBERG: No, I don't think it was to
10 envision a more structured approach or to try to make
11 it more of a regulatory view of this. I think it's just
12 to say that I think that we, as a strategic assessment
13 as you look at things, things can change.

14 MR. MCKENNEY: Right.

15 MR. LUNDBERG: And the way that technology
16 advances changes so rapidly I think that sometimes we
17 sit here and say I can't think of any new waste streams
18 coming down the pike, but what we're not -- Oh, I think
19 there's an ability to just pause the idea in this
20 assessment that technology and those advances that go
21 with that, even on a short term horizon, can have an
22 impact.

23 MR. CAMERON: Okay. Let's go to Ralph and
24 to Bill and then I would just ask the panel, generally,
25 besides new technologies, new waste forms, is there

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1 anything else in the new technology field that you want
2 to mention now that the NRC should be looking at?
3 Ralph, go ahead.

4 MR. ANDERSON: Yes. In thinking about new
5 technologies and perhaps Lisa Edwards can make a few
6 comments later, too, there's the technologies
7 associated with waste management and there's some very
8 interesting developments that have been arising there
9 that I know EPRI's been looking at that affect the types
10 of waste that one would actually have to dispose of.

11 And then there's also the issue of new
12 technologies that generate different waste forms and
13 different types of waste, you know, fuel reprocessing
14 is a wide open area, for example.

15 Dealing with high-level waste, I think back
16 to Pete Domenici, there was a vision of processes that
17 would develop different waste streams coming out of
18 processing of used nuclear fuel, not for reprocessing,
19 but actually changing the nature of waste.

20 So small modular reactors are a new
21 technology that might generate a different waste stream
22 and there are also other reactor types on the horizon
23 that might generate different waste streams. Use of
24 radionuclides in medicine is evolving and changing
25 virtually by the day that might change different types,

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1 different waste streams.

2 So I guess what I'm trying to say with that,
3 I think it's a very appropriate topic and I would just
4 point to a simple thing that kind of comes back to the
5 rather simplified strategic assessment that NRC is
6 currently engaged in.

7 I look at the waste classification tables
8 and those have a tendency to either inhibit or
9 incentivize innovations in waste management
10 technology.

11 If you gave us updated waste classification
12 tables there are technologies on the shelf that we could
13 utilize to virtually make, under the current thought
14 process, Class B and C waste go away.

15 I mean they would be such a minute volume
16 they wouldn't even be relevant anymore. But it's not
17 worthwhile to do right now under the existing waste
18 classification tables because we wouldn't derive the
19 risk-informed benefit of doing that.

20 So that correlation of new technologies to
21 the current Strategic Assessment in my mind is vitally
22 important even if it remains within a rather simplified
23 approach as it was done in 2007, and even with the
24 existing list of things.

25 In my mind waste classification tables

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1 informed by the idea of new technologies, which is, I
2 don't remember, I think it's a low priority right now,
3 that would be one of the things that would push that way
4 up.

5 MR. CAMERON: With this discussion, what
6 you're saying is that would push that up into the higher
7 priority.

8 MR. ANDERSON: It would change its
9 priority. It would change -- Yes.

10 MR. CAMERON: Okay, let's go to Bill and
11 Christine and then I want to go to Dan Shrum's idea that
12 he brought up earlier.

13 MR. DORNSIFE: In terms of this new waste
14 form, I mean you eliminate the radiological
15 characteristics, all you have is stability and size. I
16 mean what else can you throw out there that can't be
17 accommodated and, obviously, you can take care of
18 stability with re-enforced concrete containers.

19 And size, you either cut it or, you know,
20 you dispose of it as a larger component and make it
21 stable. So I don't know how much effort we ought to
22 spend on this issue.

23 MR. CAMERON: Christine?

24 MS. GELLES: I think I have a slightly
25 different perspective on that topic from Bill in that

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1 a different waste form could be a different
2 concentration of the same waste products, or waste
3 forms, into a smaller volume which, depending on what
4 happens with waste classification tables, could affect
5 where it ends up and could affect whether it's GTCC or
6 Class C.

7 MR. ANDERSON: I think that's a
8 radiological.

9 MS. GELLES: I recognize that, right. So
10 it is within the red. What I wanted to say was just
11 maybe, the discussion that Ralph had, and which I
12 completely agree with, reminded me that not just new
13 technologies, but new industries that produce waste
14 within a different regulatory or statutory framework.

15 And I'm thinking of domestic production of
16 molybdenum-99 where those, depending on what technology
17 is used, and there's great uncertainty about what waste
18 will be produced, we tried to make certain assumptions
19 and include those potential wastes in the GTCC EIS
20 inventory, but there is a, under that Act that was just
21 passed, well a year ago passed, it changes the Federal
22 waste responsibility.

23 So if domestic moly-99 producers generate
24 a low-level waste for which there is no commercial
25 disposal pathway, which could be a function of where

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1 they sit in the compact system, it's a Federal waste
2 responsibility.

3 And what type of waste they generate, if
4 it's GTCC it's already a Federal waste responsibility,
5 I won't make Dan's head explode by going back to that
6 populational change if we start talking about GTCC and
7 Part 61 again, but my point is that it's the development
8 of new industries that might produce the same kind of
9 waste but under a different statutory framework that
10 also affects these issues.

11 MALE PARTICIPANT: Yes.

12 MR. CAMERON: Good, that's great. Dan, do
13 you want to -- You want on the new technology issue or
14 do you want to go somewhere else?

15 MR. SHRUM: Something else.

16 MR. CAMERON: Okay. And is that
17 something, something else? I'm glad you're our
18 conscience on the panel.

19 MR. SHRUM: No.

20 (Laughter)

21 MR. CAMERON: But that something else, you
22 know, you brought up the thing about the implications
23 for decommissioning, maybe we should -- Why don't you
24 start us off with that and whatever else you want to say.

25 MR. SHRUM: Thank you, Chip. This is

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1 dealing with decommissioning and actually the list.
2 I'm going to go back to the list. There were seven high
3 priority issues that were identified on the list and I'm
4 going to ask the NRC to consider un-checking one of the
5 boxes.

6 Specifically, on the developing guidance
7 for 20.2002 exemptions, alternate disposal requests.
8 The reason we're asking, or I particularly am asking for
9 this to be un-checked is guidance was issued in 2009 and
10 it was issued as a draft for interim use, that's the way
11 I read it.

12 MR. SUBER: Correct.

13 MR. SHRUM: And that to me doesn't sound
14 like the box should be checked. There are a lot of other
15 implications of disposing of low-level radioactive
16 waste at a subtitle C facility or even a CERCLA facility
17 for that matter that are not being discussed, just, you
18 know, it seems to me that it's become a surrogate for
19 very low-level waste.

20 And there's another item on here, Number
21 15, promulgate rule for disposal of low activity waste,
22 and if that's what we'd like to do then let's do that
23 or let's finalize and have public input on the 20.2002
24 exemptions, which we couldn't find any and I don't
25 remember being a part of that.

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1 Not me personally, but the public in
2 general, so that was that issue. And that gets into
3 decommissioning of power plants and where is this waste
4 really going to go and are we going to send it to right
5 place and the IAEA has a very low-level radioactive
6 waste category and if that's what we're going to do then
7 let's set it up that way.

8 MR. CAMERON: Okay.

9 MR. SHRUM: That was my point and it was
10 completely unrelated to GTCC because it's at the very
11 other end of it.

12 (Laughter)

13 MR. CAMERON: We're not supposed to be
14 using that term anymore.

15 MR. SHRUM: Oh, I'm sorry.

16 MR. CAMERON: Okay. I'm teasing. Greg?

17 MR. SUBER: Can I go?

18 MR. CAMERON: Yes.

19 MR. SUBER: Okay. All right, thanks.
20 All right, good. Just as we said GTCC has no ceiling.
21 We said that Class A has no floor. And one thing that
22 we have done with that Guidance Document, and I agree
23 that it shouldn't be checked, we have received comments
24 on the interim staff guidance for the 20.2002.

25 We're in the process of consolidating that

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1 and incorporating that and then we're going to put a
2 revised Guidance Document out for comment, so we are
3 still working that issue.

4 The other concern with low activity waste
5 is that it's kind of a shared responsibility. We work
6 closely with the EPA when we're talking about, I'll use
7 another term, below regulatory concern --

8 MR. CAMERON: Oh my God.

9 (Laughter)

10 MR. SUBER: And when you enter that arena,
11 you know, you enter a very controversial arena, so we're
12 trying to wade very lightly into those waters, but we
13 do realize because of the bow wave of decommissioning
14 and a lot of other issues that we can't ignore the
15 elephant in the room.

16 So it would be good to get some suggestions
17 from the panel on, you know, how to best move forward
18 in trying to address those issues.

19 MR. CAMERON: Okay. And I just want to
20 just ask the public to just, the audience, to be a little
21 patient, we're going to move to you in just a few minutes
22 and the phones to hear what you think about all of this.

23 Ralph, what are you -- Are you going to go
24 to Greg's point?

25 MR. ANDERSON: Decommissioning/very low

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1 activity waste. What's intriguing to me, only because
2 --

3 MR. CAMERON: Yes, and, Ralph, could you
4 just speak closer into the mic.

5 MR. ANDERSON: What's intriguing to me,
6 only because it rarely comes up in conversation is NRC
7 already has a fully developed, ready to issue, proposed
8 rule that addresses that issue, the document is about
9 500 pages long.

10 When it went to the Commission, the
11 Commission did not disapprove the proposed rule. The
12 Commission tabled the proposed rule because of resource
13 impacts associated with post-9/11 regulatory
14 activities.

15 If you read the SRM it's very clear, it
16 doesn't say "disapproved." It says we're going to
17 table this for at least five years so that we can take
18 care of 9/11 issues that are much more pressing.

19 So, you know, I would just make the comment,
20 I've always been frustrated that we never got a chance
21 to comment on the culmination of all the controversial
22 work that was done over all those years, but, you know,
23 when I look at the item on the strategic assessment, I
24 mean in my mind that's the correlation, is you don't have
25 to go out and start work on a new proposed rule, you have

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1 one.

2 And I'm not saying it is the thing that you
3 should issue today, I'm just saying that there's a lot
4 of technical work that is reflected in that, so it's not
5 a huge lift.

6 MR. CAMERON: And when you -- Just for
7 clarification, when you talk about this item or this
8 item was tabled, can you just describe what that was?
9 I just want to make sure everybody --

10 MR. ANDERSON: Well it -- I forgot what
11 the, we ended up with a very convoluted name for it
12 because we didn't want to sound like BRC or other things.

13 MS. GELLES: I think it was Clearance.

14 MR. ANDERSON: It wasn't Clearance.

15 MS. GELLES: It wasn't? (Inaudible).

16 MR. ANDERSON: It moved away, it was
17 something like this disposition --

18 MR. SHRUM: Unimportant quantities of
19 Source Material?

20 MR. ANDERSON: I'm sorry?

21 MR. SHRUM: Was it UQSM, Unimportant
22 Quantities of Source Material?

23 MR. CAMERON: Well can we --

24 MR. ANDERSON: No, no, no --

25 MR. CAMERON: -- have the NRC --

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1 MR. ANDERSON: No, this was --

2 MR. CAMERON: Greg, can we --

3 MR. ANDERSON: -- disposition of solid
4 radioactive material or something like that.

5 MR. SHRUM: No.

6 MR. ANDERSON: Bobby would know.

7 MR. CAMERON: And, Bobby, could you just
8 concisely give us the description of what this term is
9 because I want to make sure people know.

10 MR. EID: I think Ralph is definitely
11 talking about Release of Solid Materials, which is
12 called the Clearance sometimes, and we have a NUREG for
13 it and we have different numbers.

14 I don't believe currently it is a problem
15 waiting for the Commission to have regulations for that.
16 The reason is if you read in NUREG 1757 we did actually
17 more or less adopt an IAEA safety standard, which is the
18 release criteria in microsievert.

19 When we said, actually in NUREG 1757, we
20 said one to five millirem, that's one thing, and
21 definitely you could conduct those analysis, you could
22 release the material and there is no problem with that
23 and currently I believe the utilities they are using
24 that kind of guidance.

25 Number two, we have also a Reg Guide 1.17,

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1 which also allows for the clearance based on surface
2 contamination and most utilities they use this
3 guidance. So I don't believe currently we are standing
4 or waiting on some kind of waste for the Commission to
5 act on for the regulation.

6 That's one of the reasons it's not priority
7 because already we are doing clearance based on
8 guidance. Thank you.

9 MR. CAMERON: Okay. So this is the
10 daughter of BRC I guess, but are you suggesting that it
11 be moved up in the priority range? Bill, go ahead, and
12 then we're going to go to Larry.

13 MR. DORNSIFE: Yes, I have a totally
14 different opinion on this low-level waste Rulemaking
15 issue because there's currently a very effective exempt
16 disposal that's working.

17 MR. CAMERON: Okay.

18 MR. DORNSIFE: And it's expanding and, you
19 know, typical of the release limits that NRC has, you
20 know, that was operating under the radar but BRC and all
21 the other things you put out got killed.

22 It raised the National fever that, you
23 know, just was unbelievable. I'm afraid a Rulemaking
24 on this issue is going to destroy the current system we
25 have.

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1 MR. CAMERON: Okay. And that's, you know,
2 I think that's good information for Melanie and then for
3 Greg in terms of where this is in the Strategic
4 Assessment. And I'm not usually attacked by members of
5 the audience, but I just want to note that I was.

6 (Laughter)

7 MR. CAMERON: But, okay, we're going out to
8 you, but Larry?

9 MR. CAMPER: Well I just wanted to -- We're
10 sort of mixing apples and oranges here although they are
11 very much alike in spectroanalysis, but as the cliché
12 goes, I mean, you know, low activity waste is not a
13 concept that's defined.

14 If you go back to the ANPR that was put out
15 by EPA a few years ago, it's hard to get a definition,
16 but some people like to think of it maybe as the lower
17 10 percent of Class A waste, so there's low activity
18 waste.

19 Then there is this Clearance that Ralph was
20 referring to and he's right. The staff put together a
21 huge effort, carefully avoiding below regulatory
22 concern, and focusing upon clearance, the criteria, and
23 so forth.

24 And, yes, that was tabled by the
25 Commission, Ralph was right. It was not eliminated by

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1 the Commission, but as a matter of practice what has
2 happened is other Rulemakings have come along over time
3 that have a higher priority, so it's remained on the back
4 burner.

5 And I think it would be fair to say that from
6 the staff's standpoint raising that topic again as a
7 Rulemaking is something that could be done, I mean that
8 is something that could be added to the Strategic
9 Assessment as a possibility, but I don't think it will
10 get much traction, I really don't, with the Commission
11 I mean, but it's a possibility.

12 MR. CAMERON: Okay. But I think that, you
13 know, this is not only to talk about things that are high
14 priority but things that, you know, shouldn't be
15 addressed for various reasons and I want to see, and
16 we'll go to Ralph and Dan -- I want see if anybody else
17 has some ideas on the panel that they want to talk about
18 and then I want to go out to the public and start with
19 Billy, Billy Cox, okay, for my health's sake.

20 MALE PARTICIPANT: So he doesn't attack
21 you again.

22 MR. CAMERON: But I want to give the panel
23 some last shots here and I just want to note that we did
24 hear from Mike, the climate change issue and the fact
25 that there might be an increase in nuclear power.

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1 We heard from Ralph about the four new
2 units, okay, and what the implications of that are. So
3 I don't want to lose track of this, but I think we do
4 need to go out to the public and the phones and if we
5 have time to revisit, to go back to the panel, we'll do
6 that before Aby has to do his recap. But, Ralph, go
7 ahead.

8 MR. ANDERSON: Yes. I just wanted to make
9 a simple clarification. Larry, I wasn't suggesting
10 that one would embark on a proposed Rulemaking. The
11 point I was trying to make is that in a reconsideration
12 of the waste classification tables and in looking at
13 both the upper and in the lower end, the benefit that
14 you have is it's not the proposed rule portion, it's the
15 500 pages of supporting technical analysis that people
16 spent all those years on that would allow one to factor
17 that.

18 If there's a reprioritization of waste
19 classifications in general, you've already got a
20 fantastic technical base on which to look at the lower
21 end of the waste classification tables. Now in no way
22 am I suggesting that we march out on a single Rulemaking
23 that deals solely with the issue of low activity waste,
24 no.

25 MR. CAMERON: Okay. Thanks, Ralph.

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1 Let's go to Dan and then we'll go to Mike.

2 MR. SHRUM: Just real quick, what Mr.
3 Dornsife said is interesting that though it will raise
4 a new can of worms and it would be a big issue and, you
5 know, we've talked about GTCC quite a bit today and, you
6 know, if we're going to talk about a can of worms when
7 we talk about disposing of that in a near surface
8 disposal facility, that's a big can of worms, too.

9 Now I want to be clear on this. I'm not
10 opposed to it, but we shouldn't not do things because
11 it won't stand the scrutiny of the public. So that's
12 the issue there, but it sounds like --

13 MR. ANDERSON: What's it suggesting then?

14 MR. SHRUM: The 20.2002 exemption that
15 process is going to be finalized and revisited a little
16 bit more. That's all I asked for in the first place,
17 so that's great. Thank you.

18 MR. CAMERON: Okay. And, Mike?

19 MR. GARNER: Just real quick. One of the
20 things that would interstate compacts is defining when
21 radioactive material becomes low-level radioactive
22 waste, especially with sealed sources.

23 That impacts right now a compacts revenue
24 stream that it depends on for its operation.
25 Specifically I'm talking about the Southwest compact.

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1 But I think defining when a radioactive material becomes
2 a low-level radioactive waste combining that with the
3 attribution concerns that compacts may have may be a
4 good way to go.

5 MR. CAMERON: Okay. Thanks, Mike. And I
6 think Mike and Dan were looking at Page 3 of the
7 Strategic Assessment document and that's open game for
8 anybody on the panel to talk about now.

9 The two things that we haven't talked about
10 were Bill's opening comment about the generic exemption
11 and Rusty was talking about the domino effect and
12 depleted, so --

13 MR. DORNSIFE: Well we discussed it just
14 recently. I mean --

15 MR. CAMERON: Okay. All right.

16 MR. DORNSIFE: -- that's fine.

17 MR. CAMERON: Ralph, final comment for
18 now?

19 MR. ANDERSON: No. I was just looking for
20 the SECY Number for the --

21 MR. CAMERON: You're doing what?

22 MR. ANDERSON: I was just looking for the
23 SECY Number for the package, but, no, I'm good. I'm
24 sorry.

25 MR. CAMERON: Okay. Earl, anything?

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1 MR. FORDHAM: Yes, I just wanted to, you
2 know, kind of go down that performance assessment rule
3 one more time because I think DOE uses Class 1 and Class
4 3 waste at one time, many, many years ago.

5 The idea there is, you know, we've got A,
6 B, and C, and A has no real packaging requirements. B
7 ends up you got to make it stable, and C you got to go
8 for depth.

9 So if you do a site-specific performance
10 assessment how are you going to take into account those
11 extras as you went up before? Are you going to
12 basically it's Class A and, you know, there will have
13 to some sort of division point there where you require
14 the waste to be stable or at least to be put into
15 something that would provide stability.

16 MR. CAMERON: Okay. Chris, are you going
17 to address that?

18 MR. MCKENNEY: Yes, I will. The
19 consideration is that the performance assessment will
20 specify the waste in all characteristics. Not only its
21 range of radiological, but also the degree that which
22 stability is required or its actual chemical form if
23 it's used in chemical barrier also as a function of the
24 waste form.

25 And so that would be all of the possible

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1 innovation methods that a waste would be able to
2 specify, but then that would be its own definition. So
3 you could do it grand form which is similar to just
4 updating the tables for your site and just be sort of
5 loose about that, or you could use a system like that
6 to define specific small classes that say concrete waste
7 forms have, I can take this and this ranges or whatever
8 else.

9 You have that flexibility in a system to
10 develop all that. The definition of what waste needs,
11 what stability, will be up to the licensee and their
12 operation of the site.

13 MR. CAMERON: Okay. I think you got some
14 reaction on that. Let's go to Bill and then Christine.

15 MR. DORNSIFE: Yes, I guess in light of
16 that site-specific WAC and the fact that, you know, yes,
17 the standards are homogenized among the Agreement
18 States, but the process, you know, what model do you use?

19 You know, how detailed does your
20 performance assessment model have to be? Does NRC
21 intend to up their oversight in terms of making sure that
22 part is also somewhat compatible?

23 MR. CAMERON: Okay. And, Christine?

24 MS. GELLES: I'm reacting to something
25 that Chris said and I apologize if I misunderstood what

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1 you were saying, but it reminds me of Larry that the path
2 forward under the proposed rule that's developing is an
3 "or," right?

4 So site-specific PA and the WAC derived
5 from that or use of the tables. You just used the words
6 "you update the tables for your site."

7 MR. MCKENNEY: My clarification was that a
8 site-specific analysis for a specific site could be as
9 simple as effectively just updating the tables. So you
10 just had a table of radionuclides and concentrations,
11 or you could go to something like, what the NNSA does,
12 where they have specific categories of things that have
13 extra criteria --

14 MS. GELLES: Yes.

15 MR. MCKENNEY: -- that make, you know,
16 concrete waste forms have the following thing and if
17 it's not concrete, if it's something else, it's
18 something else, it's RTGs.

19 You have all of these waste profiles that
20 work it down. So I was just saying that a site-specific
21 performance assessment could result in something as
22 simple as an evaluated table for that site or as
23 complicated as you want to make it.

24 MS. GELLES: Okay. And I appreciate that
25 clarification because what I just wanted to make sure

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1 that we're not, that we don't end up with a system that
2 has, you know, a site-specific PA for the four different
3 operating facilities in the United States and an
4 inconsistent application of the waste classification
5 tables where what's defined as GTCC and becomes a
6 Federal waste responsibility differs from compact
7 region to compact region.

8 That's not going to, that doesn't seem like
9 that's something that can happen. Okay.

10 MR. CAMERON: Okay. Uniformity --

11 MR. DORNSIFE: But I also advise Chris that
12 there are State laws that define what current classes
13 of waste have to, in terms of their packaging.

14 MR. CAMERON: Okay. Let's hear from Rusty
15 and then let me also ask Brad if he wants to offer
16 anything on any of this. Rusty?

17 MR. LUNDBERG: Did we move onto waste
18 classification then somehow?

19 (Laughter)

20 MR. LUNDBERG: I just want to -- Because I
21 have a comment. Well let me bring up my comment since
22 it was mentioned earlier about --

23 MR. CAMERON: I think you should do it.

24 MR. LUNDBERG: Okay. In terms of implying
25 some kind of IMPEP review of States doing this more

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1 consistently I want to offer that as you look at that
2 and as a State with a sited facility, I think that I
3 always also consider the sharing of the burden also as
4 upstream somewhat in terms of the generator as well and
5 their ability to package and to move forward so that it's
6 safe from the generation point to the disposal point.

7 So as you burden us more in terms of being
8 subject to more scrutiny by NRC, I would like to see that
9 also similarly viewed upstream at the point of
10 generation as well.

11 MR. CAMERON: Thanks, Rusty. Brad,
12 anything for us?

13 MR. BROUSSARD: Just one comment I guess,
14 or maybe clarification from Bill's statement. You
15 refer to something that said that there was something
16 in rules? You're referring to --

17 MR. DORNSIFE: Well in law regarding the
18 containerization of statute --

19 MR. BROUSSARD: Okay. Texas statute?

20 MR. DORNSIFE: Yes, yes.

21 MR. BROUSSARD: Okay.

22 MR. DORNSIFE: That was outside the,
23 really outside of, you know, Rulemaking or --

24 MR. BROUSSARD: Right.

25 MR. DORNSIFE: -- would not be impacted by

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1 a revised Part 61.

2 MR. BROUSSARD: Right. In addition to
3 what's already required.

4 MR. DORNSIFE: Yes.

5 MR. BROUSSARD: That's all I had.

6 MR. CAMERON: Okay. Thanks, Brad. And
7 let's go to the public. We have a good amount of time
8 for public comment here. We'll check on the phones.
9 We're going to go to Billy Cox right now and, Billy,
10 thanks for being patient.

11 MR. COX: Billy Cox with EPRI. I'm sorry,
12 Chip, I couldn't resist. I'd like to make a
13 clarification because I think that there's a little bit
14 of confusion, and that is that below regulatory concern
15 and clearance are terms that are used for materials that
16 are released for unrestricted use to the public.

17 Low activity waste and very low-level waste
18 are materials that are of low concern that are sent to
19 licensed disposal in some other type of disposal
20 facility.

21 MALE PARTICIPANT: Right.

22 MR. COX: So EPRI has done a lot of work on
23 the benefits of very low-level waste disposal and it has
24 a tremendous benefit in the utility industry, primarily
25 for decommissioning plants.

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1 There's some operational waste that would
2 also qualify and there would be some associated cost
3 savings with that, but the impact isn't as great.
4 There's a huge benefit to the public for having easier
5 access to very low-level waste disposal for medical
6 waste and research waste from universities and things
7 like that.

8 And that's the subject of the National
9 Academy's Report from, I think, like the early 2000's
10 is the National Academy's Report on that. So I want to
11 make sure that we're clear when we're talking about
12 things that, you know, low activity waste, or very
13 low-level waste disposal is something that we should be
14 working towards.

15 It makes us more in line with the
16 International community, it's something that's
17 accepted internationally, and it's not the same as
18 releasing material to the unrestricted use of the
19 public.

20 MR. CAMERON: Thank you, Billy, for that
21 clarification. And, Clint?

22 MR. MILLER: Yes. Clint Miller, PG&E.
23 Three items I guess. First on the technology and waste
24 forms, NRC's branch technical position on waste forms,
25 the whole battery of tests, is still standing in a very

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1 valid gold standard. I mean Korea's using it, Brazil's
2 looking at it.

3 Even though the NRC's program of issuing
4 topical reports on waste forms went defunct last
5 century, subsequent to that time three waste forms had
6 been approved using the branch technical position.

7 DOE-Idaho will do the tests. Our company
8 co-funded two of those that had been approved
9 subsequently and one that we funded completely.
10 DOE-Idaho did the tests, presented them to the CRCPD and
11 they approved them as stable waste forms.

12 So I submit that there is another, it
13 doesn't have to be the NRC, they've done their job making
14 a good form and the States in their ability to associate
15 with themselves have approved that.

16 As to the (inaudible) 61 and the tables, I
17 appreciate Larry talking about the "or," unlike our
18 colleague, who's not in the room I guess, DOE, who said
19 that, you know, the tables are out of date and unneeded
20 and that Tom Magette's comment earlier in the week that
21 he hopes to see them go away.

22 As a generator, I want it to. I've shipped
23 to all five operating disposal sites and we've lost
24 access to three of them due to no fault of our own. For
25 five years we had no access and I need to know what to

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1 do when there's no access.

2 And the tables provide a backstop or a
3 floor, and are, you know, having that certainty of how
4 you're going to separate your waste, how you're going
5 to package your waste, is very comforting.

6 So I think it comes to a crux now of, earlier
7 this week I heard a presenter from the U.K., she said
8 how do you deal with regulations when science never
9 sleeps? And I would say that there's an analogous model
10 in the radioactive regulatory world which would be
11 transportation rules.

12 The IAEA lives with A values and from time
13 to time, periodically they update those A values based
14 on the new dosimetry science and they publish those and
15 then the individual Nations, or Countries, or States are
16 free to adopt them at their leisure.

17 But the science has been put out there and
18 then those Nations can decide on themselves if what they
19 had in the past was protective of the public or if they
20 want to step up. And in the U.S., it typically takes
21 us five to ten years to adopt those and that's called
22 harmonization.

23 And that I think is a very good model.
24 Those IAEA documents are also very flexible. You know,
25 you can ship Type A, Type B, or you can go another path,

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1 LSA, and as we heard earlier this week, we can ship SCO,
2 which would help the DOE with the infinity rooms.

3 So I think having this "or" statement is,
4 you know, excellent flexibility and now I think we've
5 come to the crux of the matter is, okay, the tables are
6 there, they're embedded in the law, is there anyway to
7 get the new information on the dosimetry tables out that
8 the, in an NRC document other than, you know, a study
9 and a petition to your Government, and I think Bobby
10 suggested a NUREG.

11 If it's too hard to change the rule with the
12 numbers in the table than a NUREG, which I never thought
13 of, I would be happy --

14 MALE PARTICIPANT: (Inaudible).

15 MR. MILLER: Private, but I'm personal.
16 But a NUREG, you know, a NUREG is a means of compliance
17 and I think on the utility side we would very much like
18 to know that this is a means of compliance.

19 We would be doing it at risk, but then
20 everything's at risk. You know, when we lost access to
21 Barnwell, Barnwell wasn't straight (inaudible) 61. We
22 decided to package straight from the rules figuring that
23 we weren't certain, but we were pretty confident that
24 at the end of the day, if a site opened, we could submit
25 it and it might be approved and it did get approved at

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1 Texas.

2 Now I have a stable waste form, I don't know
3 why it's going to concrete over pack, but it's being
4 accepted.

5 MALE PARTICIPANT: It's a State law.

6 MR. MILLER: So, the last one, thank you
7 for the RIS on my item two for the Manifest, that takes
8 care of that question. The other was the, I guess a
9 dialogue with the States.

10 Again, I think the NRC is issuing excellent
11 guidance, I guess I'm old enough to remember when Jesse
12 Jackson ran for President and he said what we're selling
13 nobody's buying. It was back in the '80s when we were
14 making jet planes and stuff for war machines and
15 technology.

16 And then, you know, when we started bolting
17 those jet engines in the ground and making them gas
18 turbines and took that computer technology and made
19 consumer products, people started buying it.

20 But what we don't -- The BTP is an example
21 for waste form, you know, it's not being recognized by
22 the State even though it's an excellent product. So I'm
23 just hoping that dialogue keeps going on, NRC keeps
24 putting the backstops out there, and the States and the
25 regions, it's their prerogative on when they want to

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1 accept them.

2 MR. CAMERON: Okay. Thank you, Clint, and
3 we're going to come back to Andrew, but I wanted to go
4 to Lisa and we're going to get to Tom. Lisa?

5 MS. EDWARDS: Thanks, Chip. Lisa Edwards
6 with EPRI. And first of all, I just want to say the
7 discussion today has been fascinating. I appreciate
8 the perspectives that have been offered. I do have to
9 admit that the topics of discussion were a little
10 different than what I expected them to be.

11 EPRI's chartered for public benefit so I'm
12 going to just kind of highlight a few areas that we
13 consider to be important to be elevated on the strategic
14 assessment prioritization list. The first is kind of
15 long-term vision on very low-level waste.

16 We think this is important from a
17 decommissioning aspect, and we think it helps conserve
18 precious disposal space. And we think with the
19 upcoming discussions on 40 CFR 190 that topic is going
20 to come very much to the forefront, and it probably
21 behooves both communities to collaborate on that and
22 have a common understanding as we go forward.

23 Second point would be classification
24 tables. I did a presentation during the symposium
25 related to that. EPRI does believe that the

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1 classification tables should be updated, and I guess I
2 would highlight or hinge that on Larry's description of
3 the "or." The direction is in "or."

4 I think site-specific performance
5 assessments are far superior to any generic
6 classification table. But unless you're going to
7 remove the classification tables, per se, we think it's
8 important that the latest science be updated.

9 And the reason we think that is important
10 is the tables right now drive people to chase cesium,
11 strontium and nickel. And the new dosimetry indicates
12 they shouldn't have such a high emphasis on those
13 nuclides. Instead, people should be chasing
14 technetium, iodine and carbon-14.

15 And as the "or" option, and if we take
16 Ralph's perspective of let's look out 100 years not five
17 to seven years, we need to have that "or" option reflect
18 more current science than what was available in the very
19 early 1980s.

20 I think a third area of emphasis that I
21 thought would get more discussion than it did is not one
22 of EPRI's particular focus items but Christine did
23 mention it, is source disposal. I keep hearing that,
24 you know, it's a threat to national security. And to
25 me, somewhere in this assessment is, I think, a place

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1 for looking at how that can be, continue to be
2 encouraged.

3 I didn't expect the very, I'm just going to
4 say it, BRC or the clearance level to get brought up,
5 and I will just echo that, in my opinion, is different
6 than very low-level waste. One is for free release, one
7 is for regulated disposal that just doesn't happen to
8 be the same as low-level waste disposal.

9 And finally, manifesting requirements. I
10 appreciate what you had to say on that Greg. I think
11 it still belongs on the list because I haven't yet seen
12 what the RIS says, and I'm hoping that there'll be
13 consideration of generic scaling factors that may prove
14 to be more economical and may be better representative
15 than site-specific scaling factors.

16 MR. CAMERON: Thank you for those
17 specifics, Lisa. And we're going to come back over
18 here. I want to go to Andrew first, then I want to get
19 the public in and I'm going to just see if anybody's on
20 the phone also. But then we'll come back to the NRC
21 staff.

22 And I would just note for the panel, if you
23 hear comments such as Lisa gave just now, if you want
24 to say anything about that in terms of agree, disagree,
25 whatever, add something, you know, feel free to do that.

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1 And please introduce yourself.

2 MR. STEWART: Hi everyone. My name's
3 Andrew Stewart. I come from the Great White North, or
4 Canada, and I was just here as part of my personal
5 learning development just learning about radioactive
6 waste management being part of the next generation.
7 And I wanted to thank you guys for the opportunity to
8 hold this public workshop. It was a great learning
9 environment.

10 If I could, I'd just like to give you guys
11 some reflections on the strategic assessment of
12 low-level regulatory programs. And I guess my personal
13 observations or reflections with regards to the first
14 topic, or anticipation, are areas of the low-level waste
15 area in the context of safety and the protection of the
16 environment. Was one topic or one word that I didn't hear
17 today and that was recycling.

18 So in terms of just to give you guys an
19 example that's under our noses, each one of you have a
20 beverage container and on that beverage container is
21 sort of a recycling logo. So what I'm trying to learn
22 about is why aren't we recycling low-level waste within
23 the controlled nuclear sector itself?

24 So even though that this might have
25 radiological restrictions, with the proper RPP would we

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1 be able to use that in the next generation? So for
2 instance, we have 100 operating reactors in the United
3 States of America, and when those are decommissioning
4 all that concrete that's being generated, you know, what
5 are the unit costs of disposal of that unit concrete and
6 could you use those costs instead of disposing of it?

7 What are the unit costs for recycling it
8 into a self-contained waste form for a nuclear new
9 build? So are there any regulatory barriers preventing
10 that or, that's one of the answers that I'm looking
11 forward to see in the future, so if any of you have any
12 comments or suggestions that could help my learning
13 development it would be greatly appreciated. Thank
14 you.

15 MR. CAMERON: Okay, Bobby, go ahead.

16 MR. EID: Yes, when we talk about
17 clearance, this means the material would be at least
18 for, consumer product can be used for anything. With
19 the recycling this is actually what it is for,
20 recycling. The people, they are concerned sometimes
21 about when you recycle a material you cannot control it
22 and it could be frying pan scenario, for example.

23 What you are talking about is more, it's
24 restricted recycling where you could use the material
25 or like RPPs for other industry. Actually, this is for

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1 in France, actually they adopted this kind of approach.
2 They do not have what's called the clearance or
3 recycling. What they do, they could use the same
4 material for the same industry and recycle it, yes, but
5 they do not call it recycling or clearance.

6 So far we do not have a specific kind of
7 guidelines or rules for other uses for the same
8 industry. We do not have this. We have only clearance
9 guidance. That's what we have. That's the common
10 term.

11 If you allow me now, since I have the
12 microphone, to make comments on BRC. So please, do not
13 use the term BRC because it is not used in NRC definition
14 and regulations. And BRC before, it was rescinded
15 because it is equivalent BRC to 10 millirem. It is
16 different than a clearance.

17 So please don't use the word BRC. It is not
18 anymore used by NRC. Thank you.

19 MR. CAMERON: And it's the only
20 three-letter acronym that really is a four-letter word,
21 as I remember it. But Christine, and then Bill.

22 MS. GELLES: In response to Lisa's comment
23 about sealed sources, so I see the disposition of sealed
24 sources being intrinsically tied to the questions of
25 GTCC responsibilities, because it is a significant

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1 portion of the GTCC inventory. If a source is less
2 than, or is Class C or lower, in theory it has a
3 commercial disposition pathway, albeit potentially
4 through import to the compact facility in Texas.

5 If it's greater than Class C, then the
6 Department of Energy has the stop-gap measure of, if
7 it's orphan, having the Off-site Source Recovery
8 Program go and recover those sources. In theory, when
9 there is a GTCC disposal facility that program will go
10 away.

11 Much as they're facilitating A, B, and C
12 sealed sources of proliferation concern getting to
13 available commercial pathways, we will do the same to
14 get to the GTCC disposal facility or facilities.

15 So this discussion of can a greater than
16 Class C source be disposed of in a facility licensed
17 under Part 61 can resolve the problem entirely.
18 Because DOE, a DOE origin source that otherwise would
19 be categorized as greater than Class C can safely be
20 disposed at a DOE disposal facility which is a near
21 surface disposal facility, okay?

22 MR. CAMERON: Thank you.

23 MS. GELLES: Thank you.

24 MR. CAMERON: Thank you, Christine. And
25 Bill?

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1 MR. DORNSIFE: Now I have three. First of
2 all, if the guidance document ever gets issued for waste
3 classification we believe that most of the sealed
4 sources could be disposed of under that guidance either
5 in a 55-gallon drum or in a bigger container. I mean
6 you can literally dispose of thousands -- yes.

7 MS. GELLES: As Class C waste.

8 MR. DORNSIFE: Thousands of curies of
9 cesium using that guidance. So I don't see sealed
10 sources as a problem in terms of greater than Class C.

11 Secondly, you know, in terms of the
12 recycling we very effectively do recycling, but again
13 it's under the radar recycling. For example, in the
14 NORM arena pipes, get routinely cleaned and the scale
15 gets disposed of, typically in deep well injection.

16 In the other arena, you know, the
17 commercial arena, we use the release limits that have
18 been around Reg Guide 1.86, I guess it is, we use that
19 release limit and stuff routinely get recycled if it's
20 below that limit. And it's a major amount of stuff that
21 gets recycled. I mean, it's labor intensive to do the
22 surveys but it works.

23 And finally, on the low activity disposal,
24 if we're going to do site-specific WAC things for
25 low-level, why shouldn't we also do it for low activity?

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1 MR. CAMERON: Okay. Thanks, Bill. Let's
2 take a comment here and then we'll see who's on the phone
3 and we'll come back here.

4 MR. AZAR: My name's Miguel Azar. I'm
5 with Exelon Generation. I guess when I look at, I've
6 been listening so I kind of put you all into a different
7 category. You've got commercial side operators, and
8 then you have States, and then you have the NRC.

9 The NRC's charter is to protect the public,
10 which a nuclear operator is a part of the public.
11 You've got DOE who has a standard that they follow, and
12 you have an NRC who also dictates a standard for the rest
13 of the commercial market.

14 So I guess as I look at it you have two
15 standards right now, but you're trying to create one
16 single standard, whether you update the classification
17 rules or you adopt the site-specific, it should be only
18 one single standard.

19 Why should we have two standards, because
20 that's where confusion comes, right? Where there's
21 confusion there's profit, and utility doesn't profit
22 from that it's the commercial side operators that
23 profit. So to me, if you're protecting the public you
24 need to have one single standard that you follow for
25 everything.

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1 The second thing, I guess that I look at is,
2 you know, besides Ralph I don't see anyone really
3 representing the non-commercial generators of waste.
4 I don't see anybody from hospitals or universities or
5 anything of that source. And they need to really have
6 a seat at this table because they really impact us in
7 a personal way.

8 So for next time, maybe you can find whoever
9 that if they have a leader invite him to this discussion
10 and we can get a different perspective on things too.

11 MR. CAMERON: Thank you. Thank you,
12 Miguel.

13 MR. SUBER: Can I, just on the last?

14 MR. CAMERON: Go ahead.

15 MR. SUBER: I just want to emphasize that
16 this is the first of many meetings that we plan for this.
17 And the point that you make about medical and industrial
18 generators of radioactive waste, we're going to reach
19 out to them as well. This meeting is dominated by the
20 people who you see here based on the proximity of the
21 meeting to the waste management symposium.

22 So I mean that's a good comment that there
23 are generators, there are hospitals, there are academic
24 institutions and other industries that should have a
25 voice, and they will.

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1 MR. CAMERON: Okay, good. There's
2 another more shoes to fall, so to speak. And we're
3 going to Paul and Tom, but let's hear from Rusty, and
4 then I want to check in with our operator and see if we
5 have anybody on the phone. Rusty?

6 MR. LUNDBERG: Okay, thank you. I can't
7 help resist, just offer a little bit of thought about
8 your comment there. I think certainly States, as a
9 regulatory agency we do look to looking at consistency
10 as well as something that it's more certain for the
11 regulatory community to work from.

12 But also I think that the other aspect of
13 this, when you include policy makers that want to offer
14 up their backyard I think that's a different matter than
15 what you're addressing, I would think. And so what I'm
16 trying to say is that it's nice to look at one standard,
17 and if you only did the site-specific performance
18 analysis to determine acceptability that should have
19 been the starting point and not the waste classification
20 tables.

21 So what I'm getting to is in Utah we've made
22 the decision that waste classification is important in
23 terms of marking a line in the sand. And I think that
24 when you say it's easy to say one standard, it's going
25 to be hard to remove that line in the sand for policy

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1 purposes.

2 I don't disagree in terms of safety issues,
3 but I do say that there is that option that States have
4 under Federal law to mark the line in the sand.

5 MR. CAMERON: Okay. And just let me check
6 the phones because people may have been waiting
7 patiently. Kiandra, do we have anybody in the queue?

8 OPERATOR: Not at this time. But I just
9 would like to remind them to press star 1 and record your
10 first and last name if you happen to have a question or
11 a comment.

12 MR. CAMERON: Okay. Thanks, Kiandra.
13 I'm going to go to Paul, and then we're coming up to Tom.

14 MR. BLACK: Paul Black, Neptune & Company.
15 And I'm not going to get all of this out. I'll try the
16 best I can. But what we've been doing for years is
17 working on PAs and trying to move them in a better
18 direction, with the idea of we believe in site-specific
19 PAs. That's the way this should be done and there's
20 some move now in 10 CFR 61 towards that.

21 There are also challenges with the waste
22 concentration tables. They get in the way, and they get
23 in the way of making good decisions. And I understand,
24 though there are lots of challenges for dealing with
25 that, it's a problem. There are different legal and

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1 policy issues to be dealt with, as Rusty just said and
2 others have said.

3 But what we're talking about here is a
4 result of the new national landscape. And we're
5 talking, Ralph said something about national power
6 plants that won't be decommissioned until 2100. We're
7 a hundred years out in the future still, disposing of
8 radioactive waste.

9 We have an opportunity at the moment,
10 through what's been going on the last few years, to do
11 something about our regulations and our laws. Do we
12 really want to be a hundred years from now still arguing
13 about GTCC and Class A versus B versus C when we're
14 trying to move down the path of site-specific
15 performance assessments to make better decisions?

16 So what I would put to people involved in
17 the policy and getting up to the lawmakers, is it's time
18 to change those laws? We don't want to be having the
19 same argument a hundred years from now.

20 MR. CAMERON: Thank you, Paul. And we're
21 going to go to Tom Magette, and then we have a comment
22 or a question on the Internet on the web. So we'll go
23 over there and then we'll come back to Dan. Tom?

24 MR. MAGETTE: Thanks, Chip. I'd like to
25 make two comments about the strategic review going to

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1 Gregory's ceiling and floor. First as to the ceiling,
2 I've not advocated for the tables going away. I like
3 the "or" approach with either a site-specific WAC or the
4 tables, mostly because I think it establishes that
5 Federal/State line.

6 Now there's been a lot of discussion today
7 as to whether or not that should even go away if you're
8 doing a more site-specific approach and maybe it should.
9 That's an awfully heavy lift. And so I'm trying to seek
10 a practical ground as well, which is why.

11 But I think the tables do serve a purpose
12 for establishing that, but I think that's about the only
13 purpose that they serve and I think they should, as I
14 said on the panel, decay into uselessness even though
15 they remain in the regulations, and serve the one
16 purpose that they can then serve.

17 As to the floor, I have long been a vocal
18 advocate of a Part 61 light or a very light activity
19 scheme. I've also been a long critic of the 20.2002
20 exemption process partly because of the way it was
21 handled.

22 Partly because of the fact that it's being
23 handled, as Bill pointed out, to handle increasingly
24 large volumes of waste, which I don't believe are
25 appropriate for an exemption process, which is what it

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1 is. I don't believe it's being applied as it was
2 originally intended to be applied.

3 I'm glad to hear that the, I guess its
4 guidance is going to come out. It started as an office
5 instruction, I believe. And, you know, if you look
6 around the NRC you'll find that there are many office
7 instructions being used to help guide how things are
8 done, none of which used to be public. And I started
9 complaining to office directors about that.

10 And I've seen a few, but the original answer
11 when I found out there was a 20.2002 office instruction
12 was it's not public and I couldn't see it. Now after
13 pushing back it became this draft document, but I don't
14 really think the document itself would compare well with
15 most other guidance documents.

16 I think it needs to be more robust, but it's
17 good that we'll have a chance to comment on that now.
18 But I don't think that's appropriate. The exemption
19 process, as I said, is an exemption, and I will take
20 exception with those that say very low-level waste is
21 regulated.

22 I don't agree, Billy. That is simply not
23 true. It can be true, and I'm not saying it's parked
24 on the side of the road, but the bottom line is once it's
25 exempt, it's exempt. There are no requirements for

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1 monitoring. There are no requirements for anything
2 about that waste. It's out of the regulatory system.

3 Now if it goes into a RCRA site it may then
4 fall under another regulatory system, but there's
5 nothing about an exemption process that provides for any
6 after-the-fact consideration of that waste.

7 So it's one thing if it's small quantities,
8 it's another thing if it's millions of cubic feet of
9 decommissioning waste. There simply is no provision
10 for doing anything with that waste once it's gone
11 through the system. The system says thank you very
12 much, you're gone now.

13 So as I said, it could go into a disposal
14 site where that's not true, but there's nothing about
15 20.2002 that ensures that so I don't think that's
16 appropriate.

17 I echo the comments that were made that we
18 don't need to be talking about clearance necessarily.
19 I echo the comments that were made that you could deal
20 with this in a regulatory way that would not constitute
21 the end of the world. I think this is something that
22 would be easily handled in a new regulatory process, and
23 I think that is the appropriate way to do it. Thank you.

24 MR. CAMERON: Thank you, Tom. And we'll
25 be back to Scott, and first Dan, but what do we have on

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1 the email circuit?

2 (Off microphone comments)

3 MS. WONG: One is, as it relates to
4 compatibility with Part 61 for non-sited Agreement
5 States without a disposal facility, could the NRC staff
6 confirm the compatibility with a new revised Part 61
7 rule and regulation would not be an issue until or unless
8 the State has a plan for a low-level waste disposal
9 facility requiring regulatory oversight by the State?
10 And I believe that's a yes.

11 MR. CAMERON: Okay, and another?

12 MS. WONG: Okay, those were related to the
13 --

14 MR. CAMERON: I guess we should identify
15 who this is from since everybody --

16 (Off microphone comments)

17 MS. WONG: That was Rich Janati.

18 MR. CAMERON: Oh Rich, okay.

19 MS. WONG: Jim Kennedy also provided that
20 the title of the 2005 Rulemaking document was
21 disposition of solid waste, solid material. And then
22 the last comment is, the Appalachian Compact and the
23 whole State of Pennsylvania define radioactive
24 materials as waste, once it's manifested for shipment
25 to a low-level radioactive waste disposal facility.

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1 And that's by Rich Janati.

2 MR. CAMERON: Okay, thank you. Thank you,
3 Rich. Let's go to Dan and then we'll go on to Scott.
4 Dan?

5 MR. SHRUM: Paul just mentioned something
6 about maybe we need to consider some rules or changing
7 some of the rules. And I know this is a bit of a stretch,
8 but 61.41 gives a dose criteria to a member of the public
9 at 25 millirem. And I'm not HP -- and that's one of our
10 favorite lines that Sean and I have, we're not HPs --
11 but that just seems awfully low.

12 Put it in the context of the background dose
13 for everybody, just everybody, has gone from 360 to 620.
14 That's a 260 millirem increase for everyone. And
15 that's a ten-fold, you know, it's an order of magnitude
16 higher than what 61.41 allows. I may sound a little bit
17 like Mr. Dornsife over there. I mean we're just dosing
18 people up and they're walking around, and that's okay.
19 I'm not opposed to that. But then when you
20 look at 1,000 years, are we really going to keep that
21 at 25 millirem? And I don't think we need to do anything
22 about it, I just wanted to have that comment thrown out
23 there. It's just too low.

24 MR. CAMERON: Okay. Thank you, Dan.
25 Scott?

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1 MR. KIRK: Just to add a little bit to the
2 Part 20.2002 or the exemption process. I think as I've
3 mentioned before, at WCS we use the Part 20.2002 health
4 based standards to help guide what our limits should be,
5 but we went through an exemption process.

6 You know, Texas doesn't have a Part 20.2002-like
7 process so we used a general, generic exemption process
8 that Texas and other States have that would get us to
9 the same destination but just along a different pathway.

10 But I think what's also unique about the
11 exemption process that we have is under our low-level
12 license, we have requirements that we have to evaluate
13 the interactions of all of our sites as part of an
14 updated annual performance assessment that we provide.
15 So I think that provides a really unique tool that shows
16 that if you have a low-level waste facility that's
17 adjacent to a RCRA facility, it provides a couple of
18 unique aspects.

19 One is it allows for low activity waste to
20 be disposed of in a cost effective manner, but you still
21 ensure that the interactions between all your sites are
22 accounted for and it's assessed annually. And that's
23 evaluated by the radioactive materials assessment
24 division so that's a bit unique. And it's also
25 evaluated against a comprehensive environmental

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1 monitoring program that evaluates potential impacts
2 from all of our sites.

3 MR. CAMERON: Okay. Thanks, Scott.
4 Let's go to Billy and then I'll see if Earl is going to
5 say something.

6 MR. COX: Billy Cox with EPRI.
7 Respectfully, Tom, under RCRA all disposal solid waste
8 disposal facilities, be it under subtitle D or subtitle
9 C, are permanent and regulated.

10 MR. CAMERON: Okay. Thanks. And I think
11 he did refer to that. But we'll see. But let's, rather
12 than going back and forth right now, let's see if we have
13 any new thoughts. Earl?

14 MR. FORDHAM: This one I don't think is
15 more the policy makers than for Chris over there. We're
16 hearing a lot of argument over 25 millirem versus the
17 CERCLA standard of 10 to the minus 4. Can you guys put
18 something in writing to the equivalent?

19 MR. CAMERON: Do you understand what
20 Earl's talking about?

21 MR. MCKINNEY: Give me a model and I might
22 make them so. It is all about the decisions and the
23 scenarios you use, they can be. In decommissioning
24 space we run into it a lot, where in the end game by using
25 both processes and with the different levels of

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1 scenarios we get the same concentrations out or similar
2 concentrations at the end of decommissioning so they
3 make similar things.

4 Now there are a lot of assumptions that have
5 to go into for the 10 to the negative 4 and if you go
6 by strictness on the NCRP, 25 is 5 times 10 negative 4
7 or around that range because it continually changes for
8 a 30-year exposure.

9 So they're not exactly equivalent, but
10 again it's, when you go back to reality, back to
11 concentrations, they're fairly close and it all depends
12 on their scenarios.

13 MR. CAMERON: Thank you. Kiandra, do we
14 have anybody on the phones?

15 OPERATOR: There are no questions queued
16 at this time, Mr. Cameron.

17 MR. CAMERON: Thank you. Thank you.
18 We're going to go in the back to this gentleman back
19 there and then we'll come back. Yes, sir.

20 MR. WALKER: Yes. Stewart Walker. I'm
21 with the EPA Superfund program. So I think what pretty
22 much what Chris said was pretty accurate, but basically
23 it's always been our policy that when NRC implements
24 their decommissioning rule, in the vast majority of
25 cases they're going to follow within the CERCLA risk

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1 range.

2 MR. CAMERON: Thank you for that EPA view.
3 Since we're back here let's hear from Paul. And did
4 you, you were out of the room, I think, but someone
5 addressed your comments --

6 (Off microphone comments)

7 MR. BLACK: Too low, okay. Well, I could
8 make more comments about all of that too. But the
9 1,000-year issue, for example, when we're dealing with
10 compliance period we think that we're modeling that far
11 or further out into the future because we want to protect
12 future populations in some sense. And I'd argue that
13 we should be doing a cost-benefit analysis, and since
14 most of the world deals with social discounting I'm not
15 sure why we're not.

16 But the issue though of protecting the
17 people in the future, I think the best thing we could
18 do to protect them in the future is to fix our laws. Fix
19 the way that we approach this. Then 100 years from now,
20 we won't still be having these arguments. We'll have
21 a better path forward on how to do these as dose
22 assessments or risk assessments.

23 But that wasn't why I asked for the
24 microphone, but you threw that back at me a little bit,
25 I think. So just one comment on the 25 millirem versus

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1 10 to the minus 5 issue. And it's a comment that some
2 other people have made in very different ways than I'm
3 going to make it now.

4 But we do a lot of environmental
5 characterization and risk assessment work and sometimes
6 that involves radionuclides, CERCLA sites, RCRA sites,
7 and we're talking about soil samples. And sometimes we
8 have no contamination, but we have thorium and radium
9 and uranium in the soil.

10 What's the dose? What's the background
11 dose? Anyone want to hazard any guesses? Do you all
12 know? Because usually we think of it as 3 times 10 to
13 the minus 4.

14 MALE PARTICIPANT: Well, it's more than
15 that.

16 MR. MCKINNEY: It's radon.

17 MR. CAMERON: Okay. Thanks, Paul. Dan,
18 did you have something from before? But let me go to
19 Tom. That's right, he's been waiting. Tom?

20 MR. MAGETTE: Thanks, Chip. I just want
21 to say again, 20.2002 is an exemption process. There
22 is no health standard in 20.2002, nor is, unless you have
23 a different copy of 20.2002 than I do, Billy, is there
24 a requirement in 20.2002 that waste exempted under that
25 process goes to a RCRA facility.

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1 It's an exemption. It can go anywhere.
2 If it goes into a RCRA facility, then, it can go to a
3 RCRA facility, in which case, it is then treated under
4 whatever the regulatory requirements of that site are.
5 But that's not what the regulation requires.

6 MR. CAMERON: Okay. And let's remember
7 that we're talking about strategic, or supposed to be
8 talking about strategic assessment issues here. So
9 maybe one more point on this and let's see if there's
10 any strategic assessment comments. We'll go to Larry.

11 MR. MCKINNEY: I just want to clarify.
12 Under 20.2002, material is not exempted. The
13 possession of material is exempted. And so therefore
14 that can relate to requirements and stuff because
15 20.2002 is used on site quite a bit too. But
16 technically the material is not exempted.

17 MR. CAMERON: Okay. Thanks, Chris.
18 Larry, do you want to, let me give you this.

19 MR. CAMPER: Yes. What I want to do is,
20 Melanie, could you put the slide up that shows the medium
21 priorities? The questions that we challenged you with
22 have led to fantastic discussion, some of it at a very
23 high level and philosophical in nature. And that's
24 fine. That's good. Because the kinds of questions
25 that we asked prompted that kind of dialogue.

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1 What I would like to do though is in the few
2 minutes that we have left is to specifically put the
3 medium priority activities up, ask the panel to take a
4 look at them, and clearly other than Number 1 which I
5 think we've already agreed that greater than Class C
6 waste supposedly should move up to a higher priority,
7 do any of the others warrant being moved up to a higher
8 priority?

9 MR. CAMERON: Okay. Specific questions.
10 And I think we've heard some discussion on these topics
11 at least broadly. But Mike, are you going to go to the
12 mediums?

13 MR. GARNER: No, I was going to go to even
14 lower.

15 MR. CAMERON: Okay. While you're
16 thinking about Larry's question about medium priority,
17 let's hear from Mike and Dan.

18 MR. GARNER: Well, you know, there's two
19 that I think the, I guess, develop, perform scoping
20 study of need to revise/expand byproduct material
21 financial assurance to account for life cycle, but
22 that's already a high. I would just again emphasize --
23 oh, I'm sorry.

24 I would again emphasize that I think it will
25 be at least a medium to look at when radioactive material

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1 becomes a waste and to fold that attribution in there.
2 I think that's very important to interstate compacts,
3 and right now all the sites are located in interstate
4 compacts. So I would appreciate you throwing us a bone.

5 MR. CAMERON: Okay. I think they'll
6 remember that throwing the bone comment. Dan?

7 MR. SHRUM: As I mentioned before, with the
8 20.2002 low activity waste, Task Number 2 needs to be
9 unchecked. Task Number 10 and 11 which are both medium
10 get to this issue also. Oh, I'm sorry. Mine's listed
11 differently because it went through 20. So it's going
12 to be -- well, I'll just read them off the board there.

13 Number 3 and 4 also get to low activity
14 waste, as does 15. On the other one, on Number 6 -- it's
15 hard to read from here -- 5, identifying new waste
16 streams, I think that'll be handled with a site-specific
17 performance assessment. If there's a new waste stream,
18 I think it'll be captured there.

19 I think that one can actually just come off
20 unless somebody wants to spend a lot of time looking into
21 the future and, you know, that's pure speculation and
22 there's a way to handle this anyway. And I
23 think on Number 6, develop an information notice on
24 waste minimization, I think the industry's done, the
25 utilities, they've done an excellent job in waste

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1 minimization. You came out with this earlier, you
2 evaluated it. I think that one can come off also.

3 MR. CAMERON: So you're saying to delete,
4 eliminate 5 and 6, and on 3 and 4 you're saying that they
5 should be properly medium priority --

6 MR. SHRUM: Well, they're going to be
7 rolled into when something gets accomplished on the
8 20.2002 when it gets finalized. Those should be
9 considered in finalizing 20.2002.

10 MR. CAMERON: And your point from before is
11 that it shouldn't be a checked box. It's not done. Is
12 that correct?

13 MR. SHRUM: That's my opinion.

14 MR. CAMERON: Okay, in your opinion.
15 Right. Okay, Ralph?

16 MR. ANDERSON: Yes, I would just offer the
17 simple comment that in our view at this point would be
18 consolidating all of the items that have the word low
19 activity waste in them, and the item that has greater
20 than Class C in it, and then the item that says implement
21 major revisions to 10 CFR Part 61.

22 I would tend to look at if you can pull all
23 those together into a single item because in theory
24 those would be the significant aspects. So updating
25 the waste classification tables, looking at the upper

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1 end, looking at the lower end. That would be my
2 suggestion.

3 MR. CAMERON: Okay. And let's go to
4 Christine and then Bill, and then I think we'll see what
5 Mike has, and Larry may have a question for you.
6 Christine?

7 MS. GELLES: I'm going from Slide 19 in the
8 list of low priority activities rather than working with
9 the total 20. So I think it's the next slide. Just an
10 observation that Number 1, Number 3, Number, the next
11 to the last one, I can't tell. Number 6 is Mike's point,
12 and Number 7. All of those in my mind are elements of
13 the gap analysis that Ralph and I were discussing early
14 on.

15 So in response to Larry's point, I do agree
16 that the scope of what we were talking about could most
17 certainly be bigger than the NRC, but if you were to
18 combine those four items into one and effectively look
19 at it, sort of holistically and not in isolation that
20 goes a long way to the gap analysis that I think would
21 inform and be responsive even to Paul Black's comments
22 about revisiting the laws.

23 MR. CAMERON: And thank you for bringing
24 that up again, because let's not forget that was a major
25 point where we started this discussion about having a

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1 gap analysis and that gap analysis could include a
2 number of these points.

3 Doing the gap analysis, I think is, from
4 what I heard people saying should be a high priority item
5 even if it isn't identified as such. And some of these
6 other issues are going to be folded into the gap
7 analysis. Bill?

8 MR. DORNSIFE: Yes, can we transition to
9 the high one?

10 MR. CAMERON: Can we go to the high
11 priority activities, Melanie?

12 MR. DORNSIFE: Okay, well, there are two on
13 there that we haven't discussed. I mean, granted,
14 they're not within our expertise necessarily, but I
15 guess --

16 MR. CAMERON: And use the mic, Bill.

17 MR. DORNSIFE: There are two on there that
18 we haven't really discussed. I mean it's not
19 necessarily handles background, but if Number 5 and
20 Number 7, now Number 5, is that related to low-level
21 waste import only?

22 MR. CAMERON: He just took, for everybody
23 on the phone, Number 5 is develop procedures for
24 import/export review. And what was the other one that
25 you --

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1 MR. DORNSIFE: 7.

2 MR. CAMERON: 7 is perform scoping study of
3 the need to revise/expand byproduct material financial
4 assurance to account for life cycle cost. Okay, and
5 what are you saying about this?

6 MR. DORNSIFE: Well, on Number 5, is that
7 specific to low-level waste?

8 MR. CAMERON: And Gregory Suber's saying
9 yes.

10 MR. DORNSIFE: I mean if it is, I mean isn't
11 that effectively banned? I mean should that need to be
12 high priority?

13 MR. CAMERON: And Christine, did you have
14 something on that?

15 MR. DORNSIFE: Well, on Number 7, I mean I
16 think that's important, but I think we also need, if it's
17 your purview we need to elevate the same thing for sealed
18 sources, financial assurance for sealed sources.

19 MR. CAMERON: Okay, Christine?

20 MS. GELLES: Mine was just a
21 clarification. I always interpreted 5 to be
22 import/export internationally, so importing from
23 outside the United States and not within the compact
24 system. Okay, just wanted to make sure. Okay.

25 MR. GARNER: But Christine -- this is Mike

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1 Garner. When imports are considered, like
2 EnergySolutions they import something from Germany,
3 then NRC's office sends us the paperwork for us to then
4 comment if we have any issue with this.

5 MR. CAMERON: Leonard, did you want to say
6 something? Let's make sure we get Leonard on the
7 transcript.

8 MR. SLOTSKY: I just wanted to expand a
9 little bit on the notion of sealed sources which relates
10 to Number 7 but it's really broader. And I would
11 support several previous comments that sealed sources
12 be made a priority because of the national security
13 concern.

14 And as Rusty mentioned earlier, the Forum's
15 Disused Source Working Group will be issuing its report
16 in ten days and it has a number of recommendations, some
17 of which are directed in NRC's bailiwick. So I invite
18 everyone to look at that and we want to have a continuing
19 dialogue with NRC on that issue.

20 MR. CAMERON: Thanks, Leonard. Ralph,
21 and then we'll go to Paul.

22 MR. ANDERSON: I just wanted to add on to
23 the notion of consolidating items that would be related
24 to a Part 61 Rulemaking. However you think about this
25 in strategic assessment, the truly appropriate tool is

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1 an advance notice of proposed Rulemaking, which if you
2 look at many of the ANPRs the very first issue that's
3 put up is should we even change the rule?

4 So you have that overarching capability and
5 then you have all the sub-issues that are involved.
6 Again I'll just point to the recent 40 CFR 190 ANPR for
7 the environmental radiation standards for nuclear fuel
8 cycle. But the key is that's probably the best right
9 way to elicit broad stakeholder input on a number of
10 those issues that if you took them on would involve an
11 actual Rulemaking, especially in light of the type of
12 input that you got with the so-called limited
13 Rulemaking, which now I understand wasn't limited at
14 all.

15 But you got a lot of input surrounding that
16 when you had the policy issue. Remember in that long
17 myriad list of SRMs that you had to respond to, you went
18 out at one time and sort of asked on some high level
19 issues.

20 If you built on that with ANPR at some
21 point, it seems to me that you'd elicit the proper
22 information to formulate a much better staff position
23 for the Commission, you know, specific to the issue of
24 Rulemaking.

25 MR. CAMERON: Okay. Thank you, Ralph.

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1 We're going to go to Paul, and I'm going to check on the
2 phones again. And we do need to go to Aby Mohseni for
3 a recap at 12:45 so that people can get their planes.
4 So this is Paul Black.

5 MR. BLACK: This is just a minor issue
6 perhaps but this is the first time I've seen the list
7 of priority activities and they're split into low,
8 medium and high. And it looks to me that to some extent
9 what's high priority activities and more high urgency
10 activities, they're things that apply to this is what
11 we want to do in near term.

12 I'm not sure if that really, if urgency
13 distinguishes between priorities quite so well. I
14 think some of those on the low priority list are maybe
15 more of a priority, but maybe not quite the urgency.

16 MR. CAMERON: And that's apropos of the
17 comments that began our discussion about, I think,
18 people were saying that maybe the NRC should be looking
19 at its strategic assessment perhaps from a different
20 perspective. So that's another thought on that.

21 And Kiandra, do we have anybody on the
22 phones?

23 OPERATOR: There are no questions in the
24 queue at this time.

25 MR. CAMERON: And Melanie, any emails?

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1 Okay, no emails. I've got to go to Larry. Okay, I've
2 got to go to Larry, and then I think we need to go to
3 the recap. Okay.

4 MR. CAMPER: Thank you, Chip. I want to
5 provide clarification because Ralph said something that
6 triggered a thought. On the low priority activities
7 which was Number 4, which was identified as implement
8 major revisions to 10 CFR Part 61, remember that this
9 document was created in 2006-2007.

10 And the thinking behind those words was a
11 comprehensive revision to Part 61, and recall what
12 happened. A, the staff viewed it as a low priority
13 activity, continued ahead with the Commission paper
14 recommending the site-specific performance assessment,
15 which of course became massaged and modified along the
16 way, blending, and some other things.

17 But along the way, remember that the
18 Commission actually asked us to question during the
19 blending briefing as to why we aren't pursuing a
20 comprehensive revision to Part 61. Staff prepared a
21 paper, identified five options, told the Commission we
22 would go out and shop it, come back after we heard.

23 And we went back and made a recommendation
24 that activity be truncated, and the Commission approved
25 that. So that option, that issue falls off the table,

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1 so to speak.

2 And the only Rulemakings that we have are,
3 1, the one that's ongoing of course, and 2, we have the
4 assignment to risk inform the waste classification
5 table, currently, and unless that changes that would
6 involve a Rulemaking. But those are the only
7 Rulemakings that are in play and no comprehensive
8 revision at this point given Commission direction.

9 MR. CAMERON: And do you want to go up there
10 or do you want to --

11 MR. MOHSENI: I'll do it up there.

12 MR. CAMERON: Okay.

13 MR. MOHSENI: Well, thank you very much for
14 the panel's discussion, very informative. We're back
15 to revise everything we thought we knew to accommodate
16 the new information we gathered this morning.

17 We had two major topics to discuss. We had
18 Part 61 and the strategic assessment on Part 61. We
19 heard very interesting comments, although we are not
20 officially collecting any comments. It was mostly
21 dealing with process, so that's welcome.

22 One of the items that dealt with process was
23 get the draft of the guidance issued early or piecemeal
24 so that people have time to look at a 500-page document,
25 and you heard some discussions on that.

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1 There was also a proposal, don't give us anything
2 that's not a proposed rule. In other words be careful
3 how unfocused we can become if you do not focus what is
4 it that you are actually proposing, which we had some
5 discussion on that as well. We had some clarification
6 that the SRM language appears to leave open the issue
7 of compatibility and perhaps some other issues to
8 further discussion with the Commission after we get more
9 public input, and that was all well discussed.

10 There was some discussion about role of
11 Agreement States as co-regulators in Part 61. There
12 was good discussion about the fact that we have Texas
13 and South Carolina reps on the working group is viewed
14 positively.

15 And States believed generally, the States
16 represented here, that the engagement up until now has
17 been well, but they recommend that the public engagement
18 occur in sited States and allowing more closer people
19 involved to actually participate.

20 We also hear that the low-level waste sites
21 are national treasures and we should not underutilize
22 the resource. We also heard the importance of the
23 selection of scenarios for intruder assessment. It
24 does a lot, hinges upon the type of scenario selected.

25 Making them risk informed was a suggestion,

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1 and Low-Level Waste Forum indicated that they on behalf
2 of the compacts will be providing input. Then we had
3 a very animated discussion about the strategic
4 assessment. While we had those four areas listed as
5 questions, we had a hard time finding the slide that
6 actually had it. And we did ask the question of how is
7 the landscape changing. Folks on the panel did
8 some good critical thinking and provided good input in
9 terms of what about a gap analysis that would look at
10 a scope of the nation in a way that it's much broader
11 than just what NRC's interested in from its regulatory
12 mission. And I think the first slide made that
13 assumption that we are really looking at the landscape
14 in the nation not just as at the NRC alone.

15 And indeed, good input we received from
16 both the DOE and NEI and others on the panel that there
17 was also a suggestion to utilize scenarios in strategic
18 thinking, and the time horizon of five to seven years
19 may not be adequate to capture the essence of the changes
20 that might be needed to be thinking about in the next
21 five to seven years, so it has to be a little bit of a
22 bigger purview to be able to better focus on the five
23 to seven years.

24 That's the interpretation I'm giving.
25 That was not stated exactly this way, but nonetheless

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1 you have to be realistic in what's, a good discussion
2 of what's urgent versus what's high priority. I think
3 that priority list we had from 2007, as Larry indicated,
4 reflected the priorities at the time and we often
5 confuse at the NRC what's urgent versus what's high
6 priority.

7 So the recognition of that was very well
8 founded. We will indeed focus on high priority, always
9 mindful of the urgent. If you knew how much that
10 manifest is pressing us, the issuing the one sheet of
11 paper that we need to open up, I mean that's taking more
12 resources than actually addressing important issues
13 that are important but not urgent. Nonetheless, that's
14 our behavior and we stand right behind it.

15 There was a lot of good discussion on
16 greater than Class C, very significantly insightful for
17 us. And I really thank you, Christine and others on the
18 panel, to shedding so much light on where we are in
19 greater than Class C.

20 Although Christine remarked in her remarks
21 that a subset of what constitutes greater than Class C
22 would easily meet the requirements of proposed language
23 in site-specific analysis, what she didn't capture is
24 what about the pieces that don't fall and where would
25 they end up. And is it the transuranic, we only have

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1 three options. The high-level waste, transuranic, or
2 low level waste. So that may be something you may help
3 us with to better understand what that gap looks like.

4 But we talked about the relevance of the
5 classification tables. I mean there were a lot of good
6 thoughts that why not do away with the classification
7 tables as science has overtaken that. And there were
8 some good discussions of why you could still use the
9 greater than Class C without making it an obstacle to
10 the good science and allowing the States the flexibility
11 that they might need in terms of their internal
12 infrastructure of the regulatory frame that they have
13 in place.

14 And so being mindful of that is very
15 helpful. You guys provided that insight to us. We
16 talked about the financial responsibility versus
17 financial assurance, another concept well appreciated.
18 This is mostly for sealed sources.

19 Now the urgency of the sealed sources again
20 was forefront in this discussion from a national
21 security standpoint. The updating of the tables could
22 still occur without actually eliminating the table.
23 Apparently the necessity was described here that update
24 and bring good science to the table, that's another
25 input we got and we appreciate.

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1 And then the DOE, Larry indicated that
2 there would be future meetings between NRC and DOE to
3 better understand the level of the plans, basically,
4 about greater than Class C to better have an
5 appreciation and understanding, and future workshops on
6 this, which would be appear to be welcome by folks.

7 Then we talked about new technologies and
8 new waste streams. And new technologies, I think a lot
9 of good discussion occurred, but what I did not hear was
10 at what point in the future do new technologies cause
11 what is called waste today to become a resource, and
12 therefore affect the waste stream in some ways that we
13 can't anticipate yet. But that would be something one
14 could pursue further. Finalization of the
15 staff guidance 20.2002 appeared to get much more
16 attention than I thought. This was interesting. Good
17 discussion on that. Good discussion on low activity
18 waste and the consolidation of so many different pieces
19 of stuff that could all be consolidated. That's
20 certainly something worthy of investment.

21 Talked about the new DOE constructions of
22 CERCLA facilities, potentially for the decommissioning
23 of Paducah and Portsmouth and the impact that they may
24 have on the landscape, basically, both in the private
25 sector and capacity of if it doesn't go through how much

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1 more capacity, or how much more volume will be heading
2 towards the existing sites and what does that do in terms
3 of available capacity to everything else. We
4 do need, a suggestion was made the non-reactor side of
5 the waste generators ought to be more involved in
6 providing, issue, comments, and that was well
7 appreciated.

8 When does rad material become waste? An
9 issue that clearly seems to be of interest to some folks
10 and use of the ANPR process. And I think that's my notes
11 to highlight some of the key aspects of what we heard
12 today.

13 MR. CAMERON: Great. Great summary, Aby.
14 And Bobby said that he had something extremely important
15 to clarify.

16 MR. EID: Yes.

17 MR. MOHSENI: I'm sorry.

18 MR. CAMERON: You're not done yet.

19 MR. MOHSENI: I wasn't done.

20 MR. CAMERON: Sorry, Bobby. Go ahead.

21 MR. MOHSENI: So next steps. You know,
22 obviously we'll have more outreach on this effort.
23 This assessment, this is as Greg said, this was the first
24 session we got together. We will have more workshops,
25 more opportunities for engaging the stakeholders and

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1 the public at large.

2 And we will perhaps have a Federal Register
3 Notice sometime issued as Melanie said in 2014, in a few
4 months from now, requesting comments. And hopefully
5 you will have a document by 2015, I think. That's for
6 the strategic assessment.

7 For the low-level waste, for the Part 61,
8 the next steps obviously was like you heard from Dave
9 that it will take us about a year to be able to issue
10 a proposed rule based on where we are, and there will
11 be significant public engagement following that. And
12 we expect to have workshops, at least one workshop if
13 not more, and be able to get that to a final place.
14 Thank you.

15 MR. CAMERON: Thank you, Aby. And one
16 other point is when will the transcript be available for
17 people approximately?

18 (Off microphone comments)

19 MR. CAMERON: I'm sorry, Melanie, I should
20 have brought you this so that you can get it on the
21 transcript.

22 MS. WONG: So we should have it, in at least
23 a month we should have it up in ADAMS.

24 MR. CAMERON: Okay, so it will be in ADAMS
25 in a month. And Bobby, can you give your clarification

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1 very quickly for the people?

2 MR. EID: Yes, just something which is
3 missing here, a reference point for safety, IAEA safety
4 standard for waste disposal and the safety requirement.
5 The safety requirement for the international community.

6 And the point of reference is they say that
7 if it is less than one millisievert or 100 millirem, you
8 do not need to optimize as accepted before waste
9 disposal, and if it is two rem, this means you need to
10 optimize. So that's their range for waste disposal.

11 So therefore I want to emphasize that
12 currently the proposed safety criteria is appropriate,
13 is good, is quite safe for protection of the public.
14 Thank you.

15 MR. CAMERON: Okay, thank you. And thank
16 all of you. Thank the panel, great discussion. Thank
17 everybody in the room, and I think we're adjourned.

18 (Whereupon, the meeting in the
19 above-entitled matter was concluded at 12:57 p.m.)

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