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

Docket Number: (n/a)

Location: Phoenix, Arizona

Date: Friday, March 7, 2014

Work Order No.: NRC-612 Pages 1-195
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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

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
CHRISTOPHER MCKENNEY
ABY MOHSENI
TARSHA A. MOON
GREGORY SUBER
MELANIE WONG
MARIAN ZOBLER

PANEL MEMBERS:

RALPH ANDERSON, Nuclear Energy Institute
BRAD BROUSSARD, Texas Commission on Environmental Quality
WILLIAM DORNSIFE, Waste Control Specialists
EARL FORDHAM, Washington Department of Health
MICHAEL GARNER, Northwest Interstate Compact on Low-Level Radioactive Waste Management
CHRISTINE GELLES, U.S. Department of Energy
RUSTY LUNDBERG, Utah Department of Environmental Quality
DAN SHRUM, EnergySolutions
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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
waste strategic assessment issues.

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

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

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

      But it's not a formal comment session with
all of you on the status of the Rulemaking and I just
want to emphasize that if you do want to have whatever
you say registered as a formal comment on the Rulemaking
that there will be a time to do that after the proposed
rule goes out.
So there's no limit on what anybody can say, but I just want to tell you the NRC's going to be listening but it won't be a formal comment. The second part of the meeting, the panel discussion though, is the NRC not only wants to hear from the panelists and have the panelists react to what each other says, but they also want to hear from the public, the audience here, phones, internet, on these strategic assessment issues.

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

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

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

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

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

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

MR. CAMPER: Good morning.

(Multiple good mornings)

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

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

So it's a real opportunity. As Chip said
we have two purposes for today's gathering. One is Dr. Esh, who's on the working group for the Rulemaking on the site-specific assessment for Part 61, will share with you current Commission direction.

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

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

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

Well fast forward to now and what we're trying to do in keeping with our Agency's outreach
efforts and trying to be more attentive to and aware of stakeholders concerns, we thought we would involve you within our current effort to update the strategic assessment.

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

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

So on my behalf I want to thank all those panelists for taking part today, it's quite an August
(phonetic) group, and I think the discussion should be very interesting as you share your views with us about looking ahead in terms of our strategic assessment and focusing of our efforts, and, of course, all of your input. Thank you for that in advance.

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

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

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

Our Reporter, we thank you for recording everything. And, again, let's have a good discussion today and we value your input. Thanks for being here.
MR. CAMERON: And, Larry, did you want to take any high-level types of questions or should we just go on to David? Does anybody have a question for Larry at this point about the process or the meeting?

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

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

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

(Laughter)

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

I'm going to give you a little bit of background, a lot of this should be familiar to many of you, but not all of you. We were hoping to get some people here today that had later travel plans leaving the Waste Management Conference, and so I'll give you
In 2009 we received some Commission direction under the Staff Requirements Memorandum for SECY-08-0147 and that had two tasks in it. The first task being what we're talking about today. To perform a Rulemaking to specify requirements for site-specific analysis and the technical parameters to support such analysis and to develop a Guidance Document.

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

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

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

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

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

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

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

The second part of their direction was to use a 2-tiered period of performance with the first tier being a compliance period covering the reasonably
foreseeable future, which was not defined, and then a
second tier, a longer period to look at site
characteristics and peak dose to a designated receptor
that is not a priori.

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

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

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

61.42, as it was developed in the original
regulation, NRC developed waste classification tables
under 61.55. Those waste classification tables
basically represent NRC did a generic analysis of
intruders and did a, what we call an inverse calculation
to develop the concentrations that would afford protection to inadvertent intruders.

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

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

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

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

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

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

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

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

So then on -- We just received recent
direction under SRM SECY-13-0075 and that has some
different requirements for the staff to follow. One,
a 3-tiered period of analysis with the first tier the
compliance period of 1000 years using a 25 millirem dose limit for 61.41 and a 500 millirem dose limit for 61.42.

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

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

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

Lots of these as Chip said in his introduction and maybe Larry alluded to, this is pretty recent direction and we're working on it right now. As
part of the Rulemaking team one of my tasks is to write rule language, so I've done a first draft of changes to the Rulemaking language, but that's about it.

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

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

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

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

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

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

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

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

And they also, though, are sensitive to how people might, or the input that people might want to
provide on this and they specifically asked for this to be posed as a question in the Statement of Considerations for all of you to provide feedback about this approach.

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

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

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

You have to do the siting requirements, there's waste characteristics, there's the technical analyses, there's the engineered design that goes into it, it's not one component that you use to rely on safety and protecting public health and the environment, but
in this proposed, or in the direction from the Commission it's, we believe it's pretty clear they want this defense in depth and the safety case reflected in the regulatory requirements.

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

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

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

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

Path forward then is we will revise the
rule, the Rulemaking language, the Statement of Considerations, the Guidance Document, the Regulatory Analysis, all of that over the next year.

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

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

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

MR. CAMERON: Okay, great. Thank you, Dave. And we're going to go out to all of you for observations, questions on what Dave had presented and we're going to try as I said before to break at 9:30 and I'm sure that a lot of the discussion here and what Dave said is going to be grist for the mill for the panel
discussion also and we may have time to revisit all of
this after the panel discussion.

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

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

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

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

      A lot of it is maybe some technical
information that isn't necessarily part of -- When we
do a guidance effort we won't just limit it to the, say
the changes in the rule language, but if we've developed
guidance or worked on things pertinent to low-level
waste that we think we can put in all one document that
would help people perform their reviews we'll put that
in there, too.

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

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

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

MR. MAGETTE: Thank you. Tom Magette,
PricewaterhouseCoopers. Thanks for the update, David.
I would just like to say that I really appreciate the
process that we've gone through and we've had a lot of
opportunities to read a lot of different versions of the
rule, some of which I didn't really think were ready to
be published as a proposed rule.
And while I may not agree with every word that I would expect to see in this one I think it is ready to be a proposed rule and I'm really anxious to see it published as a proposed rule, you know, without any more interim stops.

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

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

DR. ESH: Thank you.

MR. CAMERON: Okay.

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

But one of the difficult challenges with writing a regulation is trying to foresee unintended
consequences or unforeseen interpretations of what you have, so that kind of expands it significantly when you have to go through that process and try to think how is somebody going to misinterpret this or misuse it, and so that takes a lot of time. Go ahead.

MR. CAMERON: Go ahead.

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

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

DR. ESH: Yes.

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

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

So you don't have to get it 100 percent
perfect on a proposed rule.

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

(Crosstalk)

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

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

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

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

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

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

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

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

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

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

DR. ESH: Yes, I believe our process is on
the Rulemaking working group, we have two representatives of the States, is that of the -- Larry, are they serving for the OAS, is that who they represent, the two State members on the Rulemaking working group?

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

DR. ESH: Well Texas and South Carolina.

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

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

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

DR. ESH: Yes.

MR. CAMPER: I would add one thing, too, if I might, Ralph, in answer to your question and to echo Dave's comment. Based on my own discussions with the Commissioners I think it's very clear that on one hand
there was an interest in consistency of approach, but
by the same token there is a great deal of interest in
flexibility for the Agreement States.

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

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

MR. ANDERSON: Yes.

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

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

MR. STEWART: (Inaudible).

MR. CAMERON: Okay, good. Anybody from
the State Governments want to talk about their
participation in the Rulemaking process or do they have
a question about this?
We're going to hear from the States when we get to the panel discussion on strategic assessment, but I just wanted to give them an opportunity now if they wanted to say anything. Rusty?

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

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

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

I would again echo or reaffirm what we've said before, I think for sure you would look at the 4-sited States to be able to conduct public meetings so that there's more of an opportunity to educate and help those public members understand the nature of the proposal as well.
And that way I think that the comments that you'll receive through the public, obviously being better informed, might be better, more of a directional help for you as well.

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

MR. CAMERON: Thank you, Rusty. Dave?

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

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

MR. CAMERON: Okay, other questions or comments for David on the Rulemaking, the SRMs from the Commission process? Oh, okay, good. We're going to go over here and if you could just introduce yourself.
MR. GOLDSTON: I'm Sonny Goldston, Chair of the Waste Management Working Group for the Interview Facility Contractors Operating Group, IFCOG we're known as.

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

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

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

"The low-level waste disposal facilities in this Country, both commercial and DOE, are National treasures." They're National treasures, we don't have very many of them and it's important to get this right and I would submit to you that until you analyze your facilities with state-of-the-art tools and
site-specific PAs, defense in depth, you don't know how your sites are performing or are capable of performing.

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

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

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

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

So, again, until you do the PAs and you base your WACs on your PAs and your defense in depth program as described by SECY-13-0075, you are not going to know
the answers to those questions and you can't continue
to base it on, I don't know how old is it, those tables?
How old are they?

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

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

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

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

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

The challenge was though that you have a
diversity of sites across the Country in terms of the
environmental conditions, what might be the appropriate
human practices at a site, the disposal design, all of
those things can be different and are different from
site to site.

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

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

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

The reason why they're kind of still there
is because they're used in a lot of things. They're in
the Low-Level Waste Policy Act, I believe, they're
referenced in other legislation, so it's a really, it
would be a big effort to kind of strip those out completely when other things reference them.

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

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

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

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

And I know that you're not down that path yet, and we don't know, maybe it's in the guidance that we can't see yet, but what does that look like?
DR. ESH: Yes, I talked about this a bit in a conference this week, a couple occasions. On one hand we like to afford flexibility for people to evaluate the scenarios that they think are appropriate at their site.

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

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

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

You know, this is a regulatory process that you have to do, not a risk analysis for the intruders I would say, but it's a regulatory analysis. So we try to look at something and we use like funny words like "reasonably conservative" and stuff like that.
But basically what you're trying to do is come up with a scenario that if you showed it to somebody independent, say somebody from the International community that's not familiar with your site or anything like that, they could look at it and say okay, yes, that seems pretty reasonable for a scenario to evaluating your problem.

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

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

MR. CAMERON: Okay, go ahead.

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

DR. ESH: Yes, I think it -- I can't say that right now, but I don't anticipate that it's going to be much different than what we had issued before that was publicly available, there was draft language put out that people saw.
And it kind of gives a philosophy to set the scenarios. But it's important for people to understand that can have a big influence on your calculational results, the particular scenarios you pick.

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

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

DR. ESH: It's Friday, Chip.

(Laughter)

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

DR. ESH: Thank you, yes.

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

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

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

MS. WONG: We do have one comment there.

(Inaudible).

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

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

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

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

MR. CAMERON: Well not yet, but there's still several months.
DR. ESH: From last year.

(Off the record comments)

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

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

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

MS. WONG: Yes.

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

DR. ESH: Sure, thank you.

MR. CAMERON: Thank you. So we're going to bring Melanie up and you have, her PowerPoints are in your slide collection and we'll have her come up and do that and hopefully we didn't take her too much by surprise. Okay.
MS. WONG: Thank you, Chip. I'd like to thank everyone, for those of you who stayed around after the conference and especially those who came in especially for this meeting. There's a lot of panelists that came in and so I really appreciate you coming to the meeting. Next slide, please.

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

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

There is also the potential need to dispose of a lot of decommissioning waste and depleted uranium. There was also increased concerns related to the storage of low-level waste in general and sealed sources in particular, and there was also new waste streams that could be generated, for example, by the next generation of reactors. Next slide, please.
As a result the NRC staff undertook an effort to conduct a Strategic Assessment of the Low-Level Waste Regulatory Program and the goal of the assessment was to identify and prioritize staff activities so that it could continue to ensure safe and secure disposal of low-level waste as well as ensure adaptability and predictability in the regulatory program. Next slide, please, Dave.

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

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

Seven tasks were designated as high priorities, and these are updating the guidance on extended storage of low-level waste. The uncertainty in the availability of access to low-level waste disposal facilities for many licensees was an issue facing the community.
Another high priority activity was related to the alternate disposal of low activity waste per 10 CFR 20.2002 in non-traditional low-level waste facilities such as RCRA facility.

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

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

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

We could also choose to develop internal procedures and guidance documents regarding reviewing the waste import and export applications, and we could also perform a scoping study on a need to expand the
financial assurance for Category 3 and 4 sealed sources
to account for total life cycle costs, including
disposition. Next slide, please, Dave.

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

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

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

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

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

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

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

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

Since 2007 the NRC staff has completed three of the high priority activities. In 2008 and 2011
the staff prepared regulatory issue summaries that clarified our position regarding extended storage of low-level waste.

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

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

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

The NRC staff is nearing completion of the branch technical position on concentration averaging and encapsulation, and the last two activities were put on hold due to resource constraints. Next slide, please.
After seven years much progress has been made in several activities in the assessment. In addition, the National low-level waste program continues to evolve and is very dynamic.

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

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

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

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

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

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

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

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

And so we'd like to hear in terms of what does the landscape look like in the future for the Low-Level Waste National Program and what are the
regulatory response to these changes in the landscape. Additionally we plan additional outreach efforts the future. We will issue a Federal Register notice in the next several months to solicit comments on proposed activities and we also plan to request comments once we have drafted an updated Strategic Assessment. Next slide, please.

This concludes my presentation. Thank you for your attention.

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

DR. ESH: (Inaudible).

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

MS. WONG: Which was the --

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

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

(Off microphone discussion)

MR. CAMERON: Okay. Well there's three questions for our panelists and for all of you who are in the room and on the phones and on the net, and I'm just introducing this now because I want to give you a
chance to ask Melanie any clarifying questions about her Strategic Assessment presentation because we are going to get into the substantive issues that we want to hear from you on.

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

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

MS. WONG: Yes.

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

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

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

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

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

MR. CAMERON: Okay. And, Scott?

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

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

MS. WONG: Thank you.

MR. KIRK: Now my question is the role of an Agreement State. Now as we have spoken earlier this week there's been a lot movement, some discussions about the difference between GTCC waste, which is waste that's generated by NRC licensees, verses DOE GTCC-like waste.
And it's my understanding, and maybe you can reiterate that, that if it's GTCC-like waste that's generated by the Department of Energy an Agreement State today has the ability to license those facilities, and maybe there's not the need to develop, or a requirement to develop that technical criteria as it applies to GTCC-like waste.

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

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

MR. CAMERON: Okay. And we're going to come back over here. I just -- We are, I think as Scott alluded to, and, Melanie, we're going to go to you for anything you want to say on this, but I think that we are getting into the substantive aspect of this.
So I'm going to put that Agreement State licensing of GTCC facilities just as a placeholder over here, but let me go to Larry and Melanie for anything they want to say at this point.

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

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

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

There is something called GTCC-like waste, which is a DOE product over which we have no regulatory authority, and what's interesting about it is the more we look at this, and in fact I just spoke to Frank Marcinowski this week, we want to have a meeting with the Department of Energy and talk about this because when you look at Part 61 with regards to criteria you
find no criteria, you find verbiage that it's not suitable for near surface disposal.

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

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

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

Number two, they wanted to have the pathway for allowing an alternative to geologic disposal and also the role of the State is articulated somewhat in
that Statements of Consideration around the part that I cited, the 61.55(a)(2)(iv).

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

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

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

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

But one thing I want to make sure that does happen for the NRC and that is as the Department of Energy proceeds to complete its FEIS, and presumably that may happen toward the end of this year, I want to
make absolutely certain that the Nuclear Regulatory Commission does not find itself then in the critical pathway that would delay disposal of GTCC once DOE articulates its position, its preferred alternative.

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

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

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

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

MR. GARNER: Mike Garner with the Northwest Compact. Melanie, in your priorities you referenced low activity waste two or three times. Does that include waste that potentially now goes to a Part 61 facility, the very lower end of that, or is that waste
that has never gone to a Part 61 facility?

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

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

MS. WONG: Okay, thank you.

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

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

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

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

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

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

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

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

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

MALE PARTICIPANT: Another topic slide.

MR. CAMERON: Oh, okay. There it is.
This is the first question for the panel, is what changes are anticipated and that we're looking, reference five to seven years and, Melanie, do you want to take a first stab at explaining the five to 7-year timeframe?

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

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

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

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

So in saying it's scoping does that mean
it's not necessarily bumped up on the priority list at this time? I was just a little confused because you had a public meeting, so obviously it must've had some importance.

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

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

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

So does that answer your question? Okay.

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

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

MR. CAMERON: Kiandra, are you there?
OPERATOR: Yes, I'm here. There are no questions in the queue at this time.

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

MS. WONG: There's nothing.

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

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

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

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

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

Can anybody update us on what the status of that effort it?
MR. SUBER: Yes. This is Gregory Suber again. What the staff is in the process of doing is issuing a Regulatory Issue Summary. And what the Regulatory Issue Summary is going to do, it's going to point to existing NRC guidance that tells people who have to fill out the Manifest how they could use scaling factors consistent with previous NRC guidance, which would give waste generators or people who are disposing of waste the option of using the previous guidance to substitute a value for the lower limits of detections that they are currently using on the Manifest.

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

MALE PARTICIPANT: That's all right.

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

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

(Whereupon, the foregoing matter went off the record at 9:33 a.m. and went back on the record at
MR. CAMERON: Okay, if we could have our panelists up we'll get started with the strategic assessment portion of the meeting. And in a minute I'm going to ask the panelists to just briefly introduce themselves.

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

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

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

What I'm going to do is, after we get done with just the simple introductions, I'm going to ask each panelist to give me one major change that they think
is going to happen and just enough to explain, to allow people to understand what that is.

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

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

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

MR. SUBER: Except Larry, I think.

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

So I think we're ready to go. And we are ahead of time. So we have plenty of time. But, Bill,
can we just start with you, introduce yourself? And if you want to say, you know, a sentence, anybody wants to say a sentence or two about what they would like to see achieved by the panel, that would be fine too. But you can just simply introduce yourself if you want to.

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

MR. CAMERON: Okay. And Christine?

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

And within our portfolio is ensuring we have disposal facilities for all of the DOE generated waste or the other wastes that are designated Federal waste under the Low-Level Waste Policy Act amendments. And that includes providing for the environmental analysis to site a Greater Than Class C low-level waste disposal facility. I'm stymied to pick just one in
MR. CAMERON: Well, okay. Well, we'll --

MS. GELLES: -- of developing the

landscape.

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

MS. GELLES: Perfect, thank you.

MR. CAMERON: And I would just ask everybody, the mics are not really directional either. So you probably have to speak pretty directly into them.

Okay, Ralph, you want to just introduce yourself too?

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

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

MR. ANDERSON: Ralph Anderson --

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

MR. ANDERSON: -- Nuclear Energy Institute.

MR. CAMERON: Okay.

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

MR. LUNDBERG: Rusty Lundburg, with the State of Utah Department of Environmental Quality. I'm
the Director of the Division of Radiation Control in that department.

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

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

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

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

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

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

And then the second one would be the construction of new DOE disposal facilities and the impact that has on the commercial market and therefore
the availability and viability of facilities.

MR. CAMERON: Okay. Great, thank you.

GTCC and construction of new --

MS. GELLES: New DOE disposal facilities.

MR. CAMERON: Okay. And Ralph?

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

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

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

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

MR. ANDERSON: Yes.

MR. CAMERON: Okay. And Brad?
MR. BROUSSARD: Well, first of all I'd like to thank the NRC for the invitation for Texas to participate on this panel. I think it's a lot of good dialogue that's going on that actually should continue. Hopefully, some of these discussions will help further the progress that's needed for some of these waste management issues. Chip, I would have to agree with Christine. I think Greater Than Class C is going to be kind of a pressing issue at least for the State of Texas, DOE and the NRC.

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

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

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

A couple of things that I wanted to point out was obviously for us the impact that changes regarding the regulatory structure, for example,
changes in Part 61 and their domino effect on a matter like depleted uranium disposal.

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

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

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

MR. CAMERON: Okay. So the changes in technology could cover a lot of different types of changes --
MR. LUNDBERG: Right.

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

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

MR. CAMERON: Okay, good. Thanks, Rusty.

And Greg, we'll go to Earl, okay. Earl?

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

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

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

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

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

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

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

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

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

MR. GARNER: Well, I guess I'll kind of build on Ralph's comments. And that is I would
anticipate, with the growing population and to address climate change, there will certainly be a push for additional nuclear utilities in the future.

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

MR. DORNSIFE: Can I add another one?

MR. CAMERON: Yes.

(Off the record comments)

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

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

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

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

MR. CAMERON: And I think that's an important point that you just emphasized, is dealing with it as a community. Ralph and then Rusty, Ralph?
MR. ANDERSON: Yes. Considering a much longer horizon, one of the things that I see is lacking is a defined gap analysis of the current framework against both current low-level waste disposal needs and future low-level waste disposal needs. You know, where is the framework lacking and where is the framework inefficient or inconsistent?

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

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

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

I think we ought to be thinking about the NRC Regulatory framework, and the criteria and the underlying technical basis and its relationship to
dealing with waste incidental to a large nuclear event, whether that event be a nuclear accident or whether it be a terrorist event.

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

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

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

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

And certainly that's the way I'd couch this, is that in the near term over this three, five or maybe even shorter, obviously, but to look at a dialogue
that would look at some of the gaps that may exit regarding financial assurance.

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

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

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

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

MR. GARNER: Yes. I would just add to, I guess, Bill's comment. It's been 29 years since the Policy Amendments Act was adopted. We've had EnergySolutions, we've had Waste Control Specialists come online.
But I know EnergySolutions has indicated that their current section of land that they use for disposal, they've got 25 to 30 years left. We've got about 40 years left in Richland. It's not too soon to be thinking about how we're going to develop new sites for the future.

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

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

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

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

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

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

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

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

So this is going to be a great discussion, already a lot of good ideas for the NRC to consider here. And I was going to suggest that maybe we start with the GTCC and the new DOE facilities. And I say that,
Christine, you have your tent up. Why don't you tell us what's on your mind. And then maybe we'll move to the discussion of GTCC.

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

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

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

And then related to that, you know, our regulatory structure, the Low-Level Waste Policy Act amendments, it may well need to be revisited because of the developments that are happening in the limited Rulemaking on Part 61.
So I said this a little bit flippantly on a panel during the conference, but in a world where waste classification tables don't exist in 61.55 potentially, the definition of what is Greater Than Class C, low-level waste, I mean, Greater Than Class C ceases to exist if there's not a Class C definition. Because there isn't a table.

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

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

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

And while it's a small inventory relative to the volumes that the Department of Energy manages annually, it's less than 6,000 cubic meters, sealed
sources are small. So if they're making up, you know, as much as a half of that, that's a lot of sources.

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

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

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

We don't dispose of transuranic waste as a matter of practice in near surface disposal facilities at DOE. We send them to WIPP. So the WIPP Land Withdrawal Act, with its defense only designation, is
another one of those statutory constraints that perhaps needs to be revisited in the context of us managing a really fully thought out radioactive waste management program as a Nation that, I think, would be greatly informed by a gap analysis such as the one that Ralph described.

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

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

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

Maybe there's a different disposal recommendation for different sub-sets of the GTCC waste. And while our draft DIS did not contain a
preferred alternative, our final will. But the viability of finding those details within the preferred alternative is challenging for us for many reasons having to do with public acceptance and eventual impacts on commercial markets.

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

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

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

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

And, Greg, did you have a clarification you
wanted to put before we go to Bill and Dan?

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

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

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

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

MR. CAMERON: Okay. And let's hold that thought. I mean, that's a great question. And we'll put that in the parking lot for an example. I mean, you know, I think the gap analysis is something that's
resonating with a lot of people. But what role would the NRC play in doing a gap analysis. And if you're doing that, where is that on your strategic assessment?

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

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

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

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

MR. CAMERON: Let's hear from Dan, and then we'll go back over to Ralph. But Bill just put a couple of things on the table for the Agreement State issue that came up before and who's going to be the organization ultimately responsible for disposal. So anybody on the
panel has some perspectives on that, let's hear those too. Dan?

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

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

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

MR. SUBER: Okay.

MS. GELLES: It's a regulatory licensing clarification. It's not developing new regulations for GTCC disposal that define a depth, or a degree of engineered barriers or a type of disposal facility. And it gets, fundamentally, I think to the language in the act that it's a facility licensed by the NRC presumed
that it was going to be a geologic disposal facility, much like the high-level waste disposal facility is to be licensed by the NRC.

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

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

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

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

MR. DORNSIFE: But my issue, Christine,
when Brad brought up the ownership and financial responsibility, was for us, obviously, which cell would it have to go in in terms of who owns it. And secondly, who would pay for it? It's not who would finance the disposal facility. It's the waste itself.

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

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

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

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

MS. GELLES: Yes.

MR. CAMERON: Okay. All right. David?

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

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

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

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

MR. CAMERON: Okay. And again, I think we just need to keep in mind here what we're trying to do is to identify areas that should be on a higher priority or a lower priority in terms of the NRC's strategic assessment. So we may not be treating this as a seminar
on everything about GTCC, okay. If I got that acronym correct.

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

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

MS. GELLES: You bet.

MR. CAMERON: -- talking about --

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

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

And, I mean, I agree with what they've said. Depending on what, getting back to my heterogeneity
point, depending on what the preferred alternative or chosen disposition facility is, disposal facility design is for each of the subsets of Greater Than Class C low-level waste, if some of that GTCC population is going to a facility that's not addressed by Part 61, then perhaps there would be some need for licensing criteria.

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

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

MR. SUBER: Yes, it is.

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

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

MR. ANDERSON: I hate to do it this way. I'd like to hear what Larry was going to say. Because I have a hunch it's relevant to --
MR. CAMERON: Okay. Well, good. Larry?

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

    (Laughter)

    (Off the record comments)

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

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

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

    So what we've got to do is work our way
through that legal policy question. But a subset of
that legal policy question is that if you look in Part
61 right now, recognize that Greater Than Class C waste
is specifically articulated is not suitable for near surface disposal.

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

MR. DORNISFE: Which specifically says it could include Greater Than Class C.

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

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

And in the meantime, we'll be running to ground these legal policy questions so we can speak to that. And then we'll focus upon the technical criteria, whatever it is and if there should be some.
So just wanted to give you that waterfront (phonetic) to think about.

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

MR. BROUSSARD: And Larry's sitting close.

MR. CAMERON: Did Larry --

(Off the record comments)

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

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

The quantitative definition of Greater Than Class C as embodied in legislation, to quote one of our colleagues from earlier, doesn't reflect the
state-of-the-art and doesn't really reflect our current understanding of adequate protection of health and safety which is the NRC's primary mission.

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

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

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

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

And I point to Bill's comment that, you know, I don't think Texas as it sits today is what we
had in mind when we were inventing all these terms and laws. You know, I'd look at the site down there, and I'd say, well, that isn't anything like the picture that we had in our heads in those days.

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

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

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

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

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

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

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

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

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

MR. FORDHAM: I'd like to take a little bit
further down what Larry had said is, you know, the
shallow land barrier acceptance of, you know, Class A,
B and C, all this is going to be based on a performance
assessment that each site runs.

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

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

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

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

There were a number of topics brought up
that relate to changes in technology with the implications that are the longer horizon in terms of the new plants that are being built, the point that Dan raised about more plants being decommissioned, Mike's comment about climate change.

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

MS. GELLES: Yes.

MR. CAMERON: Okay.

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

But also a replacement, a second CERCLA disposal facility at the Oak Ridge Reservation is to support continued D&D of the nuclear facilities that are at that reservation, whether it's from the Y-12 facility which is run by NNSA, Oak Ridge National Laboratory or
the completion of ETTP which was the first gas use diffusion plant for us to D&D.

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

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

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

MR. ANDERSON: Yes, just a simple comment. You had listed a number of things and talked about lumping together. And this is kind of driven by
Christine's comments.

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

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

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

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

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

MR. CAMERON: Okay. Let's -- Christine?
MS. GELLES: I think Ralph, he's on to something there. So a few of the other ones that were listed was maybe it's time to start thinking about the next facilities, the next disposal facilities, having a longer time planning horizon for the Strategic Assessment.

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

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

Generally, things that might go outside of the NRC's Strategic Assessment, okay, that doesn't mean that it wouldn't be useful for the NRC to be the laboring oar, so to speak, to do those things, but, Ralph, in terms of that process you just talked about I just want
to be clear on how that relates to the gap analysis that we've been talking about?

In other words, could that be the same thing?

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

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

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

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

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

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

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

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

And, you know, I know Melanie is listening to all of this and she's sort of the point person on strategic assessment, but I think you're hearing some things that might lead you to maybe take a different vision of strategic assessment. But what do you want to say about these things?
MR. SUBER: Well I just want to get a kind of a better understanding of what we can do and as a Segway, I'll make a statement. When we first embarked on the Rulemaking, which started off as a unique, the DU Rulemaking, a unique waste streams Rulemaking, and now it's the site-specific analysis Rulemaking.

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

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

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

Maximum flexibility for whether it would be an Agreement State regulator, or the NRC who is approving the rule. So if I could get some more specific examples of what particular parts of the rule
as it is proposed, would not address the fact that the
DOE may make a decision to use a commercial facility and
that another commercial facility may come up on the
horizon.

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

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

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

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

So we have been long doing site-specific
performance assessments to inform the development of
waste acceptance criteria for each of our DOE low-level
waste disposal facilities and the WAC for those
facilities differ depending upon the hydrology and geology and the design of those specific facilities, but they're performance based.

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

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

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

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

MR. SUBER: Yes, I understand that one of the first things you have to do when you're shipping waste for disposal is you have to classify it. And what you're saying is that if you have a WAC that already says
this particular sealed source can be adequately disposed of at my site then what relevance is that classification, whether it's GTCC, Class C, Class B. Am I -- Okay.

MS. GELLES: Let me be more direct.

MR. SUBER: Okay.

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

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

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

So the only people who can get waste into that Fed Cell are the Department of Energy, even if it comes from one of those other Federal agencies, but it's because it's a DOE responsibility to provide disposal.
The same exists, I believe, now we, DOE, also use commercial facilities for the DOE generated waste. If we send a low-level waste item to a DOE disposal facility it's low-level waste and it meets our performance assessment.

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

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

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

So I mean if their facility is robust enough to take Greater Than Class C low-level waste because their site-specific PA says they can then, you know, is that going to be consistent with the revision of Part 61 or not because what really they would be taking is Greater Than Class C low-level waste?
MR. CAMERON: Okay. And I'm going to go to Bill and then let me check in with anybody, I see -- Yes, I saw Ralph and I saw Earl shaking their heads in agreement when Christine was talking.

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

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

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

MR. CAMPER: Well there are several things that come to mind listening to this discussion. First,
from a purely management operational perspective if you will, I mean what we're interested in in our update of the LLW SA is those things that are currently under NRC's regulatory purview as clearly articulated by law.

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

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

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

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

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

There is no elimination of the
classification table as currently directed by the Commission, rather it's to add an "or" pathway using the WAC and that's the charge the staff is working toward.

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

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

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

MR. SHRUM: No, that's fine.

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

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

MR. CAMERON: No, no, Boby wanted to say something.
MR. SHRUM: Oh, okay.

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

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

MR. CAMERON: To another topic?

MR. SHRUM: Yes.

(Laughter)

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

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

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

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

MR. CAMERON: Yes. Okay.

MR. SHRUM: It was (inaudible) limit.

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

(Crosstalk)

MR. EID: Well my name is Boby Eid, I'm with the U.S. NRC and I work with Larry. I just wanted to make a clarification. There was a question about the 30 meters and why 30 meters. Bill, he mentioned that and why not cannot be more than 30 meters.
I just wanted to mention that under NRC regulations in the definition of 61.2, the definition, defines near surface disposal as a facility with land disposal in which radioactive waste is disposed of in or within the upper 30 meters.

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

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

MR. CAMERON: Thank you very much, Boby. And at least in my view I think if -- You've raised a number of points about Greater Than Class C, you talked about a process, what I call a process point in terms of what the Strategic Assessment/gap analysis should be looking at, but I think it's a little bit broader than the NRC's current vision.
And so now we're going to go to a new topic and I was going to suggest the changes in technology. Is that a good one to look at this point? Rusty, do you want to just tee that up for us and we'll talk about that and then we'll go on to some other topics?

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

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

MR. CAMERON: Okay. Let’s talk about that and I guess the first question that I think might be
asked of the NRC is, is that type of change in
technology, is that now considered in either the high,
medium, or low priority, or is this a new thing?

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

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

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

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

They all had to be approved by the NRC
before a reactor could use a certain concrete or use
bitumen, or whatever process for waste form. But as
part of when we went into maintenance mode we provided
that to allow the States to use that on the, for their
own, for the disposal sites and we had stopped doing
those sort of technical documents.

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

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

MR. MCKENNEY: Right.

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

MR. CAMERON: Okay. Let’s go to Ralph and
to Bill and then I would just ask the panel, generally,
besides new technologies, new waste forms, is there
anything else in the new technology field that you want
to mention now that the NRC should be looking at?
Ralph, go ahead.

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

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

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

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

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

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

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

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

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

In my mind waste classification tables
informed by the idea of new technologies, which is, I don't remember, I think it's a low priority right now, that would be one of the things that would push that way up.

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

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

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

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

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

MR. CAMERON: Christine?

MS. GELLES: I think I have a slightly different perspective on that topic from Bill in that
a different waste form could be a different concentration of the same waste products, or waste forms, into a smaller volume which, depending on what happens with waste classification tables, could affect where it ends up and could affect whether it's GTCC or Class C.

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

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

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

So if domestic moly-99 producers generate a low-level waste for which there is no commercial disposal pathway, which could be a function of where
they sit in the compact system, it's a Federal waste responsibility.

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

MALE PARTICIPANT: Yes.

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

MR. SHRUM: Something else.

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

MR. SHRUM: No.

(Laughter)

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

MR. SHRUM: Thank you, Chip. This is
dealing with decommissioning and actually the list. I'm going to go back to the list. There were seven high priority issues that were identified on the list and I'm going to ask the NRC to consider un-checking one of the boxes.

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

MR. SUBER: Correct.

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

And there's another item on here, Number 15, promulgate rule for disposal of low activity waste, and if that's what we'd like to do then let's do that or let's finalize and have public input on the 20.2002 exemptions, which we couldn't find any and I don't remember being a part of that.
Not me personally, but the public in general, so that was that issue. And that gets into decommissioning of power plants and where is this waste really going to go and are we going to send it to right place and the IAEA has a very low-level radioactive waste category and if that's what we're going to do then let's set it up that way.

MR. CAMERON: Okay.

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

(Laughter)

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

MR. SHRUM: Oh, I'm sorry.

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

MR. SUBER: Can I go?

MR. CAMERON: Yes.

MR. SUBER: Okay. All right, thanks.

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

We're in the process of consolidating that
and incorporating that and then we're going to put a revised Guidance Document out for comment, so we are still working that issue.

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

MR. CAMERON: Oh my God.

(Laughter)

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

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

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

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

MR. ANDERSON: Decommissioning/very low
activity waste. What's intriguing to me, only because
--

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

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

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

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

So, you know, I would just make the comment, I've always been frustrated that we never got a chance to comment on the culmination of all the controversial work that was done over all those years, but, you know, when I look at the item on the strategic assessment, I mean in my mind that's the correlation, is you don't have to go out and start work on a new proposed rule, you have
And I'm not saying it is the thing that you should issue today, I'm just saying that there's a lot of technical work that is reflected in that, so it's not a huge lift.

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

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

MS. GELLES: I think it was Clearance.

MR. ANDERSON: It wasn't Clearance.

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

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

MR. SHRUM: Unimportant quantities of Source Material?

MR. ANDERSON: I'm sorry?

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

MR. CAMERON: Well can we --

MR. ANDERSON: No, no, no --

MR. CAMERON: -- have the NRC --
MR. ANDERSON: No, this was --

MR. CAMERON: Greg, can we --

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

MR. SHRUM: No.

MR. ANDERSON: Boby would know.

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

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

I don't believe currently it is a problem waiting for the Commission to have regulations for that.

The reason is if you read in NUREG 1757 we did actually more or less adopt an IAEA safety standard, which is the release criteria in microsievert.

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

Number two, we have also a Reg Guide 1.17,
which also allows for the clearance based on surface contamination and most utilities they use this guidance. So I don't believe currently we are standing or waiting on some kind of waste for the Commission to act on for the regulation.

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

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

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

MR. CAMERON: Okay.

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

It raised the National fever that, you know, just was unbelievable. I'm afraid a Rulemaking on this issue is going to destroy the current system we have.
MR. CAMERON: Okay. And that's, you know, I think that's good information for Melanie and then for Greg in terms of where this is in the Strategic Assessment. And I'm not usually attacked by members of the audience, but I just want to note that I was.

(Laughter)

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

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

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

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

And, yes, that was tabled by the Commission, Ralph was right. It was not eliminated by
the Commission, but as a matter of practice what has happened is other Rulemakings have come along over time that have a higher priority, so it's remained on the back burner.

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

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

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

MR. CAMERON: But I want to give the panel some last shots here and I just want to note that we did hear from Mike, the climate change issue and the fact that there might be an increase in nuclear power.
We heard from Ralph about the four new units, okay, and what the implications of that are. So I don't want to lose track of this, but I think we do need to go out to the public and the phones and if we have time to revisit, to go back to the panel, we'll do that before Aby has to do his recap. But, Ralph, go ahead.

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

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

MR. CAMERON: Okay. Thanks, Ralph.
Let’s go to Dan and then we'll go to Mike.

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

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

MR. ANDERSON: What's it suggesting then?

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

MR. CAMERON: Okay. And, Mike?

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

That impacts right now a compacts revenue stream that it depends on for its operation. Specifically I'm talking about the Southwest compact.
But I think defining when a radioactive material becomes a low-level radioactive waste combining that with the attribution concerns that compacts may have may be a good way to go.

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

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

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

MR. CAMERON: Okay. All right.

MR. DORNSIFE: -- that's fine.

MR. CAMERON: Ralph, final comment for now?

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

MR. CAMERON: You're doing what?

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

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

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

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

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

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

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

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

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

MR. DORNSIFE: Yes, I guess in light of that site-specific WAC and the fact that, you know, yes, the standards are homogenized among the Agreement States, but the process, you know, what model do you use? You know, how detailed does your performance assessment model have to be? Does NRC intend to up their oversight in terms of making sure that part is also somewhat compatible?

MR. CAMERON: Okay. And, Christine?

MS. GELLES: I'm reacting to something that Chris said and I apologize if I misunderstood what
you were saying, but it reminds me of Larry that the path forward under the proposed rule that's developing is an "or," right?

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

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

MS. GELLES: Yes.

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

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

MS. GELLES: Okay. And I appreciate that clarification because what I just wanted to make sure
that we're not, that we don't end up with a system that has, you know, a site-specific PA for the four different operating facilities in the United States and an inconsistent application of the waste classification tables where what's defined as GTCC and becomes a Federal waste responsibility differs from compact region to compact region.

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

MR. CAMERON: Okay. Uniformity --

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

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

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

(Laughter)

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

MR. CAMERON: I think you should do it.

MR. LUNDBERG: Okay. In terms of implying some kind of IMPEP review of States doing this more
consistently I want to offer that as you look at that
and as a State with a sited facility, I think that I
always also consider the sharing of the burden also as
upstream somewhat in terms of the generator as well and
their ability to package and to move forward so that it's
safe from the generation point to the disposal point.

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

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

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

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

MR. BROUSSARD: Okay. Texas statute?

MR. DORNSIFE: Yes, yes.

MR. BROUSSARD: Okay.

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

MR. BROUSSARD: Right.

MR. DORNSIFE: -- would not be impacted by
a revised Part 61.

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

MR. DORNSIFE: Yes.

MR. BROUSSARD: That's all I had.

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

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

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

MALE PARTICIPANT: Right.

MR. COX: So EPRI has done a lot of work on the benefits of very low-level waste disposal and it has a tremendous benefit in the utility industry, primarily for decommissioning plants.
There's some operational waste that would also qualify and there would be some associated cost savings with that, but the impact isn't as great. There's a huge benefit to the public for having easier access to very low-level waste disposal for medical waste and research waste from universities and things like that.

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

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

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

MR. MILLER: Yes. Clint Miller, PG&E. Three items I guess. First on the technology and waste forms, NRC's branch technical position on waste forms, the whole battery of tests, is still standing in a very
valid gold standard. I mean Korea's using it, Brazil's looking at it.

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

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

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

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

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

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

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

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

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

   And that I think is a very good model.
Those IAEA documents are also very flexible. You know,
you can ship Type A, Type B, or you can go another path,
LSA, and as we heard earlier this week, we can ship SCO, which would help the DOE with the infinity rooms.

So I think having this "or" statement is, you know, excellent flexibility and now I think we've come to the crux of the matter is, okay, the tables are there, they're embedded in the law, is there anyway to get the new information on the dosimetry tables out that the, in an NRC document other than, you know, a study and a petition to your Government, and I think Boby suggested a NUREG.

If it's too hard to change the rule with the numbers in the table than a NUREG, which I never thought of, I would be happy --

MALE PARTICIPANT: (Inaudible).

MR. MILLER: Private, but I'm personal. But a NUREG, you know, a NUREG is a means of compliance and I think on the utility side we would very much like to know that this is a means of compliance.

We would be doing it at risk, but then everything's at risk. You know, when we lost access to Barnwell, Barnwell wasn't straight (inaudible) 61. We decided to package straight from the rules figuring that we weren't certain, but we were pretty confident that at the end of the day, if a site opened, we could submit it and it might be approved and it did get approved at
Texas.

Now I have a stable waste form, I don't know why it's going to concrete over pack, but it's being accepted.

MALE PARTICIPANT: It's a State law.

MR. MILLER: So, the last one, thank you for the RIS on my item two for the Manifest, that takes care of that question. The other was the, I guess a dialogue with the States.

Again, I think the NRC is issuing excellent guidance, I guess I'm old enough to remember when Jesse Jackson ran for President and he said what we're selling nobody's buying. It was back in the '80s when we were making jet planes and stuff for war machines and technology.

And then, you know, when we started bolting those jet engines in the ground and making them gas turbines and took that computer technology and made consumer products, people started buying it.

But what we don't -- The BTP is an example for waste form, you know, it's not being recognized by the State even though it's an excellent product. So I'm just hoping that dialogue keeps going on, NRC keeps putting the backstops out there, and the States and the regions, it's their prerogative on when they want to
accept them.

MR. CAMERON: Okay. Thank you, Clint, and we're going to come back to Andrew, but I wanted to go to Lisa and we're going to get to Tom. Lisa?

MS. EDWARDS: Thanks, Chip. Lisa Edwards with EPRI. And first of all, I just want to say the discussion today has been fascinating. I appreciate the perspectives that have been offered. I do have to admit that the topics of discussion were a little different than what I expected them to be.

EPRI's chartered for public benefit so I'm going to just kind of highlight a few areas that we consider to be important to be elevated on the strategic assessment prioritization list. The first is kind of long-term vision on very low-level waste.

We think this is important from a decommissioning aspect, and we think it helps conserve precious disposal space. And we think with the upcoming discussions on 40 CFR 190 that topic is going to come very much to the forefront, and it probably behooves both communities to collaborate on that and have a common understanding as we go forward.

Second point would be classification tables. I did a presentation during the symposium related to that. EPRI does believe that the
classification tables should be updated, and I guess I would highlight or hinge that on Larry's description of the "or." The direction is in "or."

I think site-specific performance assessments are far superior to any generic classification table. But unless you're going to remove the classification tables, per se, we think it's important that the latest science be updated.

And the reason we think that is important is the tables right now drive people to chase cesium, strontium and nickel. And the new dosimetry indicates they shouldn't have such a high emphasis on those nuclides. Instead, people should be chasing technetium, iodine and carbon-14.

And as the "or" option, and if we take Ralph's perspective of let's look out 100 years not five to seven years, we need to have that "or" option reflect more current science than what was available in the very early 1980s.

I think a third area of emphasis that I thought would get more discussion than it did is not one of EPRI's particular focus items but Christine did mention it, is source disposal. I keep hearing that, you know, it's a threat to national security. And to me, somewhere in this assessment is, I think, a place
for looking at how that can be, continue to be encouraged.

I didn't expect the very, I'm just going to say it, BRC or the clearance level to get brought up, and I will just echo that, in my opinion, is different than very low-level waste. One is for free release, one is for regulated disposal that just doesn't happen to be the same as low-level waste disposal.

And finally, manifesting requirements. I appreciate what you had to say on that Greg. I think it still belongs on the list because I haven't yet seen what the RIS says, and I'm hoping that there'll be consideration of generic scaling factors that may prove to be more economical and may be better representative than site-specific scaling factors.

MR. CAMERON: Thank you for those specifics, Lisa. And we're going to come back over here. I want to go to Andrew first, then I want to get the public in and I'm going to just see if anybody's on the phone also. But then we'll come back to the NRC staff.

And I would just note for the panel, if you hear comments such as Lisa gave just now, if you want to say anything about that in terms of agree, disagree, whatever, add something, you know, feel free to do that.
And please introduce yourself.

MR. STEWART: Hi everyone. My name's Andrew Stewart. I come from the Great White North, or Canada, and I was just here as part of my personal learning development just learning about radioactive waste management being part of the next generation. And I wanted to thank you guys for the opportunity to hold this public workshop. It was a great learning environment.

If I could, I'd just like to give you guys some reflections on the strategic assessment of low-level regulatory programs. And I guess my personal observations or reflections with regards to the first topic, or anticipation, are areas of the low-level waste area in the context of safety and the protection of the environment. Was one topic or one word that I didn't hear today and that was recycling.

So in terms of just to give you guys an example that's under our noses, each one of you have a beverage container and on that beverage container is sort of a recycling logo. So what I'm trying to learn about is why aren't we recycling low-level waste within the controlled nuclear sector itself?

So even though that this might have radiological restrictions, with the proper RPP would we
be able to use that in the next generation? So for instance, we have 100 operating reactors in the United States of America, and when those are decommissioning all that concrete that's being generated, you know, what are the unit costs of disposal of that unit concrete and could you use those costs instead of disposing of it?

What are the unit costs for recycling it into a self-contained waste form for a nuclear new build? So are there any regulatory barriers preventing that or, that's one of the answers that I'm looking forward to see in the future, so if any of you have any comments or suggestions that could help my learning development it would be greatly appreciated. Thank you.

MR. CAMERON: Okay, Boby, go ahead.

MR. EID: Yes, when we talk about clearance, this means the material would be at least for, consumer product can be used for anything. With the recycling this is actually what it is for, recycling. The people, they are concerned sometimes about when you recycle a material you cannot control it and it could be frying pan scenario, for example.

What you are talking about is more, it's restricted recycling where you could use the material or like RPPs for other industry. Actually, this is for
in France, actually they adopted this kind of approach. They do not have what's called the clearance or recycling. What they do, they could use the same material for the same industry and recycle it, yes, but they do not call it recycling or clearance.

So far we do not have a specific kind of guidelines or rules for other uses for the same industry. We do not have this. We have only clearance guidance. That's what we have. That's the common term.

If you allow me now, since I have the microphone, to make comments on BRC. So please, do not use the term BRC because it is not used in NRC definition and regulations. And BRC before, it was rescinded because it is equivalent BRC to 10 millirem. It is different than a clearance.

So please don't use the word BRC. It is not anymore used by NRC. Thank you.

MR. CAMERON: And it's the only three-letter acronym that really is a four-letter word, as I remember it. But Christine, and then Bill.

MS. GELLES: In response to Lisa's comment about sealed sources, so I see the disposition of sealed sources being intrinsically tied to the questions of GTCC responsibilities, because it is a significant
portion of the GTCC inventory. If a source is less than, or is Class C or lower, in theory it has a commercial disposition pathway, albeit potentially through import to the compact facility in Texas.

If it's greater than Class C, then the Department of Energy has the stop-gap measure of, if it's orphan, having the Off-site Source Recovery Program go and recover those sources. In theory, when there is a GTCC disposal facility that program will go away.

Much as they're facilitating A, B, and C sealed sources of proliferation concern getting to available commercial pathways, we will do the same to get to the GTCC disposal facility or facilities.

So this discussion of can a greater than Class C source be disposed of in a facility licensed under Part 61 can resolve the problem entirely. Because DOE, a DOE origin source that otherwise would be categorized as greater than Class C can safely be disposed at a DOE disposal facility which is a near surface disposal facility, okay?

MR. CAMERON: Thank you.

MS. GELLES: Thank you.

MR. CAMERON: Thank you, Christine. And Bill?
MR. DORNSIFE: Now I have three. First of all, if the guidance document ever gets issued for waste classification we believe that most of the sealed sources could be disposed of under that guidance either in a 55-gallon drum or in a bigger container. I mean you can literally dispose of thousands -- yes.

MS. GELLES: As Class C waste.

MR. DORNSIFE: Thousands of curies of cesium using that guidance. So I don't see sealed sources as a problem in terms of greater than Class C.

Secondly, you know, in terms of the recycling we very effectively do recycling, but again it's under the radar recycling. For example, in the NORM arena pipes, get routinely cleaned and the scale gets disposed of, typically in deep well injection.

In the other arena, you know, the commercial arena, we use the release limits that have been around Reg Guide 1.86, I guess it is, we use that release limit and stuff routinely get recycled if it's below that limit. And it's a major amount of stuff that gets recycled. I mean, it's labor intensive to do the surveys but it works.

And finally, on the low activity disposal, if we're going to do site-specific WAC things for low-level, why shouldn't we also do it for low activity?
MR. CAMERON: Okay. Thanks, Bill. Let's take a comment here and then we'll see who's on the phone and we'll come back here.

MR. AZAR: My name's Miguel Azar. I'm with Exelon Generation. I guess when I look at, I've been listening so I kind of put you all into a different category. You've got commercial side operators, and then you have States, and then you have the NRC.

The NRC's charter is to protect the public, which a nuclear operator is a part of the public. You've got DOE who has a standard that they follow, and you have an NRC who also dictates a standard for the rest of the commercial market.

So I guess as I look at it you have two standards right now, but you're trying to create one single standard, whether you update the classification rules or you adopt the site-specific, it should be only one single standard.

Why should we have two standards, because that's where confusion comes, right? Where there's confusion there's profit, and utility doesn't profit from that it's the commercial side operators that profit. So to me, if you're protecting the public you need to have one single standard that you follow for everything.
The second thing, I guess that I look at is, you know, besides Ralph I don't see anyone really representing the non-commercial generators of waste. I don't see anybody from hospitals or universities or anything of that source. And they need to really have a seat at this table because they really impact us in a personal way.

So for next time, maybe you can find whoever that if they have a leader invite him to this discussion and we can get a different perspective on things too.

MR. CAMERON: Thank you. Thank you, Miguel.

MR. SUBER: Can I, just on the last?

MR. CAMERON: Go ahead.

MR. SUBER: I just want to emphasize that this is the first of many meetings that we plan for this. And the point that you make about medical and industrial generators of radioactive waste, we're going to reach out to them as well. This meeting is dominated by the people who you see here based on the proximity of the meeting to the waste management symposium.

So I mean that's a good comment that there are generators, there are hospitals, there are academic institutions and other industries that should have a voice, and they will.
MR. CAMERON: Okay, good. There's another more shoes to fall, so to speak. And we're going to Paul and Tom, but let's hear from Rusty, and then I want to check in with our operator and see if we have anybody on the phone. Rusty?

MR. LUNDBERG: Okay, thank you. I can't help resist, just offer a little bit of thought about your comment there. I think certainly States, as a regulatory agency we do look to looking at consistency as well as something that it's more certain for the regulatory community to work from.

But also I think that the other aspect of this, when you include policy makers that want to offer up their backyard I think that's a different matter than what you're addressing, I would think. And so what I'm trying to say is that it's nice to look at one standard, and if you only did the site-specific performance analysis to determine acceptability that should have been the starting point and not the waste classification tables.

So what I'm getting to is in Utah we've made the decision that waste classification is important in terms of marking a line in the sand. And I think that when you say it's easy to say one standard, it's going to be hard to remove that line in the sand for policy
purposes.

I don't disagree in terms of safety issues, but I do say that there is that option that States have under Federal law to mark the line in the sand.

MR. CAMERON: Okay. And just let me check the phones because people may have been waiting patiently. Kiandra, do we have anybody in the queue?

OPERATOR: Not at this time. But I just would like to remind them to press star 1 and record your first and last name if you happen to have a question or a comment.

MR. CAMERON: Okay. Thanks, Kiandra. I'm going to go to Paul, and then we're coming up to Tom.

MR. BLACK: Paul Black, Neptune & Company. And I'm not going to get all of this out. I'll try the best I can. But what we've been doing for years is working on PAs and trying to move them in a better direction, with the idea of we believe in site-specific PAs. That's the way this should be done and there's some move now in 10 CFR 61 towards that.

There are also challenges with the waste concentration tables. They get in the way, and they get in the way of making good decisions. And I understand, though there are lots of challenges for dealing with that, it's a problem. There are different legal and
policy issues to be dealt with, as Rusty just said and others have said.

But what we're talking about here is a result of the new national landscape. And we're talking, Ralph said something about national power plants that won't be decommissioned until 2100. We're a hundred years out in the future still, disposing of radioactive waste.

We have an opportunity at the moment, through what's been going on the last few years, to do something about our regulations and our laws. Do we really want to be a hundred years from now still arguing about GTCC and Class A versus B versus C when we're trying to move down the path of site-specific performance assessments to make better decisions?

So what I would put to people involved in the policy and getting up to the lawmakers, is it's time to change those laws? We don't want to be having the same argument a hundred years from now.

MR. CAMERON: Thank you, Paul. And we're going to go to Tom Magette, and then we have a comment or a question on the Internet on the web. So we'll go over there and then we'll come back to Dan. Tom?

MR. MAGETTE: Thanks, Chip. I'd like to make two comments about the strategic review going to
Gregory's ceiling and floor. First as to the ceiling, I've not advocated for the tables going away. I like the "or" approach with either a site-specific WAC or the tables, mostly because I think it establishes that Federal/State line.

Now there's been a lot of discussion today as to whether or not that should even go away if you're doing a more site-specific approach and maybe it should. That's an awfully heavy lift. And so I'm trying to seek a practical ground as well, which is why.

But I think the tables do serve a purpose for establishing that, but I think that's about the only purpose that they serve and I think they should, as I said on the panel, decay into uselessness even though they remain in the regulations, and serve the one purpose that they can then serve.

As to the floor, I have long been a vocal advocate of a Part 61 light or a very light activity scheme. I've also been a long critic of the 20.2002 exemption process partly because of the way it was handled.

Partly because of the fact that it's being handled, as Bill pointed out, to handle increasingly large volumes of waste, which I don't believe are appropriate for an exemption process, which is what it
is. I don't believe it's being applied as it was originally intended to be applied.

I'm glad to hear that the, I guess its guidance is going to come out. It started as an office instruction, I believe. And, you know, if you look around the NRC you'll find that there are many office instructions being used to help guide how things are done, none of which used to be public. And I started complaining to office directors about that.

And I've seen a few, but the original answer when I found out there was a 20.2002 office instruction was it's not public and I couldn't see it. Now after pushing back it became this draft document, but I don't really think the document itself would compare well with most other guidance documents.

I think it needs to be more robust, but it's good that we'll have a chance to comment on that now. But I don't think that's appropriate. The exemption process, as I said, is an exemption, and I will take exception with those that say very low-level waste is regulated.

I don't agree, Billy. That is simply not true. It can be true, and I'm not saying it's parked on the side of the road, but the bottom line is once it's exempt, it's exempt. There are no requirements for
monitoring. There are no requirements for anything about that waste. It's out of the regulatory system.

Now if it goes into a RCRA site it may then fall under another regulatory system, but there's nothing about an exemption process that provides for any after-the-fact consideration of that waste.

So it's one thing if it's small quantities, it's another thing if it's millions of cubic feet of decommissioning waste. There simply is no provision for doing anything with that waste once it's gone through the system. The system says thank you very much, you're gone now.

So as I said, it could go into a disposal site where that's not true, but there's nothing about 20.2002 that ensures that so I don't think that's appropriate.

I echo the comments that were made that we don't need to be talking about clearance necessarily. I echo the comments that were made that you could deal with this in a regulatory way that would not constitute the end of the world. I think this is something that would be easily handled in a new regulatory process, and I think that is the appropriate way to do it. Thank you.

MR. CAMERON: Thank you, Tom. And we'll be back to Scott, and first Dan, but what do we have on
the email circuit?

(Off microphone comments)

MS. WONG: One is, as it relates to compatibility with Part 61 for non-sited Agreement States without a disposal facility, could the NRC staff confirm the compatibility with a new revised Part 61 rule and regulation would not be an issue until or unless the State has a plan for a low-level waste disposal facility requiring regulatory oversight by the State? And I believe that's a yes.

MR. CAMERON: Okay, and another?

MS. WONG: Okay, those were related to the --

MR. CAMERON: I guess we should identify who this is from since everybody --

(Off microphone comments)

MS. WONG: That was Rich Janati.

MR. CAMERON: Oh Rich, okay.

MS. WONG: Jim Kennedy also provided that the title of the 2005 Rulemaking document was disposition of solid waste, solid material. And then the last comment is, the Appalachian Compact and the whole State of Pennsylvania define radioactive materials as waste, once it's manifested for shipment to a low-level radioactive waste disposal facility.
And that's by Rich Janati.

MR. CAMERON: Okay, thank you. Thank you, Rich. Let's go to Dan and then we'll go on to Scott. Dan?

MR. SHRUM: Paul just mentioned something about maybe we need to consider some rules or changing some of the rules. And I know this is a bit of a stretch, but 61.41 gives a dose criteria to a member of the public at 25 millirem. And I'm not HP -- and that's one of our favorite lines that Sean and I have, we're not HPs -- but that just seems awfully low.

Put it in the context of the background dose for everybody, just everybody, has gone from 360 to 620. That's a 260 millirem increase for everyone. And that's a ten-fold, you know, it's an order of magnitude higher than what 61.41 allows. I may sound a little bit like Mr. Dornsife over there. I mean we're just dosing people up and they're walking around, and that's okay. I'm not opposed to that. But then when you look at 1,000 years, are we really going to keep that at 25 millirem? And I don't think we need to do anything about it, I just wanted to have that comment thrown out there. It's just too low.

MR. CAMERON: Okay. Thank you, Dan. Scott?
MR. KIRK: Just to add a little bit to the Part 20.2002 or the exemption process. I think as I've mentioned before, at WCS we use the Part 20.2002 health based standards to help guide what our limits should be, but we went through an exemption process.

You know, Texas doesn't have a Part 20.2002-like process so we used a general, generic exemption process that Texas and other States have that would get us to the same destination but just along a different pathway.

But I think what's also unique about the exemption process that we have is under our low-level license, we have requirements that we have to evaluate the interactions of all of our sites as part of an updated annual performance assessment that we provide. So I think that provides a really unique tool that shows that if you have a low-level waste facility that's adjacent to a RCRA facility, it provides a couple of unique aspects.

One is it allows for low activity waste to be disposed of in a cost effective manner, but you still ensure that the interactions between all your sites are accounted for and it's assessed annually. And that's evaluated by the radioactive materials assessment division so that's a bit unique. And it's also evaluated against a comprehensive environmental
monitoring program that evaluates potential impacts from all of our sites.

MR. CAMERON: Okay. Thanks, Scott. Let's go to Billy and then I'll see if Earl is going to say something.

MR. COX: Billy Cox with EPRI. Respectfully, Tom, under RCRA all disposal solid waste disposal facilities, be it under subtitle D or subtitle C, are permanent and regulated.

MR. CAMERON: Okay. Thanks. And I think he did refer to that. But we'll see. But let's, rather than going back and forth right now, let's see if we have any new thoughts. Earl?

MR. FORDHAM: This one I don't think is more the policy makers than for Chris over there. We're hearing a lot of argument over 25 millirem versus the CERCLA standard of 10 to the minus 4. Can you guys put something in writing to the equivalent?

MR. CAMERON: Do you understand what Earl's talking about?

MR. MCKINNEY: Give me a model and I might make them so. It is all about the decisions and the scenarios you use, they can be. In decommissioning space we run into it a lot, where in the end game by using both processes and with the different levels of
scenarios we get the same concentrations out or similar concentrations at the end of decommissioning so they make similar things.

Now there are a lot of assumptions that have to go into for the 10 to the negative 4 and if you go by strictness on the NCRP, 25 is 5 times 10 negative 4 or around that range because it continually changes for a 30-year exposure.

So they're not exactly equivalent, but again it's, when you go back to reality, back to concentrations, they're fairly close and it all depends on their scenarios.

MR. CAMERON: Thank you. Kiandra, do we have anybody on the phones?

OPERATOR: There are no questions queued at this time, Mr. Cameron.

MR. CAMERON: Thank you. Thank you. We're going to go in the back to this gentleman back there and then we'll come back. Yes, sir.

MR. WALKER: Yes. Stewart Walker. I'm with the EPA Superfund program. So I think what pretty much what Chris said was pretty accurate, but basically it's always been our policy that when NRC implements their decommissioning rule, in the vast majority of cases they're going to follow within the CERCLA risk
range.

MR. CAMERON: Thank you for that EPA view. Since we're back here let's hear from Paul. And did you, you were out of the room, I think, but someone addressed your comments --

(Off microphone comments)

MR. BLACK: Too low, okay. Well, I could make more comments about all of that too. But the 1,000-year issue, for example, when we're dealing with compliance period we think that we're modeling that far or further out into the future because we want to protect future populations in some sense. And I'd argue that we should be doing a cost-benefit analysis, and since most of the world deals with social discounting I'm not sure why we're not.

But the issue though of protecting the people in the future, I think the best thing we could do to protect them in the future is to fix our laws. Fix the way that we approach this. Then 100 years from now, we won't still be having these arguments. We'll have a better path forward on how to do these as dose assessments or risk assessments.

But that wasn't why I asked for the microphone, but you threw that back at me a little bit, I think. So just one comment on the 25 millirem versus
10 to the minus 5 issue. And it's a comment that some other people have made in very different ways than I'm going to make it now.

But we do a lot of environmental characterization and risk assessment work and sometimes that involves radionuclides, CERCLA sites, RCRA sites, and we're talking about soil samples. And sometimes we have no contamination, but we have thorium and radium and uranium in the soil.

What's the dose? What's the background dose? Anyone want to hazard any guesses? Do you all know? Because usually we think of it as 3 times 10 to the minus 4.

MALE PARTICIPANT: Well, it's more than that.

MR. MCKINNEY: It's radon.

MR. CAMERON: Okay. Thanks, Paul. Dan, did you have something from before? But let me go to Tom. That's right, he's been waiting. Tom?

MR. MAGETTE: Thanks, Chip. I just want to say again, 20.2002 is an exemption process. There is no health standard in 20.2002, nor is, unless you have a different copy of 20.2002 than I do, Billy, is there a requirement in 20.2002 that waste exempted under that process goes to a RCRA facility.
It's an exemption. It can go anywhere. If it goes into a RCRA facility, then, it can go to a RCRA facility, in which case, it is then treated under whatever the regulatory requirements of that site are. But that's not what the regulation requires.

MR. CAMERON: Okay. And let's remember that we're talking about strategic, or supposed to be talking about strategic assessment issues here. So maybe one more point on this and let's see if there's any strategic assessment comments. We'll go to Larry.

MR. MCKINNEY: I just want to clarify. Under 20.2002, material is not exempted. The possession of material is exempted. And so therefore that can relate to requirements and stuff because 20.2002 is used on site quite a bit too. But technically the material is not exempted.

MR. CAMERON: Okay. Thanks, Chris. Larry, do you want to, let me give you this.

MR. CAMPER: Yes. What I want to do is, Melanie, could you put the slide up that shows the medium priorities? The questions that we challenged you with have led to fantastic discussion, some of it at a very high level and philosophical in nature. And that's fine. That's good. Because the kinds of questions that we asked prompted that kind of dialogue.
What I would like to do though is in the few minutes that we have left is to specifically put the medium priority activities up, ask the panel to take a look at them, and clearly other than Number 1 which I think we've already agreed that greater than Class C waste supposedly should move up to a higher priority, do any of the others warrant being moved up to a higher priority?

MR. CAMERON: Okay. Specific questions. And I think we've heard some discussion on these topics at least broadly. But Mike, are you going to go to the mediums?

MR. GARNER: No, I was going to go to even lower.

MR. CAMERON: Okay. While you're thinking about Larry's question about medium priority, let's hear from Mike and Dan.

MR. GARNER: Well, you know, there's two that I think the, I guess, develop, perform scoping study of need to revise/expand byproduct material financial assurance to account for life cycle, but that's already a high. I would just again emphasize -- oh, I'm sorry.

I would again emphasize that I think it will be at least a medium to look at when radioactive material
becomes a waste and to fold that attribution in there. I think that's very important to interstate compacts, and right now all the sites are located in interstate compacts. So I would appreciate you throwing us a bone.

MR. CAMERON: Okay. I think they'll remember that throwing the bone comment. Dan?

MR. SHRUM: As I mentioned before, with the 20.2002 low activity waste, Task Number 2 needs to be unchecked. Task Number 10 and 11 which are both medium get to this issue also. Oh, I'm sorry. Mine's listed differently because it went through 20. So it's going to be -- well, I'll just read them off the board there.

Number 3 and 4 also get to low activity waste, as does 15. On the other one, on Number 6 -- it's hard to read from here -- 5, identifying new waste streams, I think that'll be handled with a site-specific performance assessment. If there's a new waste stream, I think it'll be captured there.

I think that one can actually just come off unless somebody wants to spend a lot of time looking into the future and, you know, that's pure speculation and there's a way to handle this anyway. And I think on Number 6, develop an information notice on waste minimization, I think the industry's done, the utilities, they've done an excellent job in waste
minimization. You came out with this earlier, you evaluated it. I think that one can come off also.

MR. CAMERON: So you're saying to delete, eliminate 5 and 6, and on 3 and 4 you're saying that they should be properly medium priority --

MR. SHRUM: Well, they're going to be rolled into when something gets accomplished on the 20.2002 when it gets finalized. Those should be considered in finalizing 20.2002.

MR. CAMERON: And your point from before is that it shouldn't be a checked box. It's not done. Is that correct?

MR. SHRUM: That's my opinion.

MR. CAMERON: Okay, in your opinion. Right. Okay, Ralph?

MR. ANDERSON: Yes, I would just offer the simple comment that in our view at this point would be consolidating all of the items that have the word low activity waste in them, and the item that has greater than Class C in it, and then the item that says implement major revisions to 10 CFR Part 61.

I would tend to look at if you can pull all those together into a single item because in theory those would be the significant aspects. So updating the waste classification tables, looking at the upper
end, looking at the lower end. That would be my suggestion.

MR. CAMERON: Okay. And let's go to Christine and then Bill, and then I think we'll see what Mike has, and Larry may have a question for you. Christine?

MS. GELLES: I'm going from Slide 19 in the list of low priority activities rather than working with the total 20. So I think it's the next slide. Just an observation that Number 1, Number 3, Number, the next to the last one, I can't tell. Number 6 is Mike's point, and Number 7. All of those in my mind are elements of the gap analysis that Ralph and I were discussing early on.

So in response to Larry's point, I do agree that the scope of what we were talking about could most certainly be bigger than the NRC, but if you were to combine those four items into one and effectively look at it, sort of holistically and not in isolation that goes a long way to the gap analysis that I think would inform and be responsive even to Paul Black's comments about revisiting the laws.

MR. CAMERON: And thank you for bringing that up again, because let's not forget that was a major point where we started this discussion about having a
gap analysis and that gap analysis could include a number of these points.

    Doing the gap analysis, I think is, from what I heard people saying should be a high priority item even if it isn't identified as such. And some of these other issues are going to be folded into the gap analysis. Bill?

    MR. DORNSIFE: Yes, can we transition to the high one?

    MR. CAMERON: Can we go to the high priority activities, Melanie?

    MR. DORNSIFE: Okay, well, there are two on there that we haven't discussed. I mean, granted, they're not within our expertise necessarily, but I guess --

    MR. CAMERON: And use the mic, Bill.

    MR. DORNSIFE: There are two on there that we haven't really discussed. I mean it's not necessarily handles background, but if Number 5 and Number 7, now Number 5, is that related to low-level waste import only?

    MR. CAMERON: He just took, for everybody on the phone, Number 5 is develop procedures for import/export review. And what was the other one that you --
MR. DORNSIFE: 7.

MR. CAMERON: 7 is perform scoping study of the need to revise/expand byproduct material financial assurance to account for life cycle cost. Okay, and what are you saying about this?

MR. DORNSIFE: Well, on Number 5, is that specific to low-level waste?

MR. CAMERON: And Gregory Suber's saying yes.

MR. DORNSIFE: I mean if it is, I mean isn't that effectively banned? I mean should that need to be high priority?

MR. CAMERON: And Christine, did you have something on that?

MR. DORNSIFE: Well, on Number 7, I mean I think that's important, but I think we also need, if it's your purview we need to elevate the same thing for sealed sources, financial assurance for sealed sources.

MR. CAMERON: Okay, Christine?

MS. GELLES: Mine was just a clarification. I always interpreted 5 to be import/export internationally, so importing from outside the United States and not within the compact system. Okay, just wanted to make sure. Okay.

MR. GARNER: But Christine -- this is Mike
Garner. When imports are considered, like EnergySolutions they import something from Germany, then NRC's office sends us the paperwork for us to then comment if we have any issue with this.

MR. CAMERON: Leonard, did you want to say something? Let's make sure we get Leonard on the transcript.

MR. SLOTSKY: I just wanted to expand a little bit on the notion of sealed sources which relates to Number 7 but it's really broader. And I would support several previous comments that sealed sources be made a priority because of the national security concern.

And as Rusty mentioned earlier, the Forum's Disused Source Working Group will be issuing its report in ten days and it has a number of recommendations, some of which are directed in NRC's bailiwick. So I invite everyone to look at that and we want to have a continuing dialogue with NRC on that issue.

MR. CAMERON: Thanks, Leonard. Ralph, and then we'll go to Paul.

MR. ANDERSON: I just wanted to add on to the notion of consolidating items that would be related to a Part 61 Rulemaking. However you think about this in strategic assessment, the truly appropriate tool is
an advance notice of proposed Rulemaking, which if you look at many of the ANPRs the very first issue that's put up is should we even change the rule?

So you have that overarching capability and then you have all the sub-issues that are involved. Again I'll just point to the recent 40 CFR 190 ANPR for the environmental radiation standards for nuclear fuel cycle. But the key is that's probably the best right way to elicit broad stakeholder input on a number of those issues that if you took them on would involve an actual Rulemaking, especially in light of the type of input that you got with the so-called limited Rulemaking, which now I understand wasn't limited at all.

But you got a lot of input surrounding that when you had the policy issue. Remember in that long myriad list of SRMs that you had to respond to, you went out at one time and sort of asked on some high level issues.

If you built on that with ANPR at some point, it seems to me that you'd elicit the proper information to formulate a much better staff position for the Commission, you know, specific to the issue of Rulemaking.

MR. CAMERON: Okay. Thank you, Ralph.
We're going to go to Paul, and I'm going to check on the phones again. And we do need to go to Aby Mohseni for a recap at 12:45 so that people can get their planes. So this is Paul Black.

MR. BLACK: This is just a minor issue perhaps but this is the first time I've seen the list of priority activities and they're split into low, medium and high. And it looks to me that to some extent what's high priority activities and more high urgency activities, they're things that apply to this is what we want to do in near term.

I'm not sure if that really, if urgency distinguishes between priorities quite so well. I think some of those on the low priority list are maybe more of a priority, but maybe not quite the urgency.

MR. CAMERON: And that's apropos of the comments that began our discussion about, I think, people were saying that maybe the NRC should be looking at its strategic assessment perhaps from a different perspective. So that's another thought on that.

And Kiandra, do we have anybody on the phones?

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

MR. CAMERON: And Melanie, any emails?
Okay, no emails. I've got to go to Larry. Okay, I've got to go to Larry, and then I think we need to go to the recap. Okay.

MR. CAMPER: Thank you, Chip. I want to provide clarification because Ralph said something that triggered a thought. On the low priority activities which was Number 4, which was identified as implement major revisions to 10 CFR Part 61, remember that this document was created in 2006-2007.

And the thinking behind those words was a comprehensive revision to Part 61, and recall what happened. A, the staff viewed it as a low priority activity, continued ahead with the Commission paper recommending the site-specific performance assessment, which of course became massaged and modified along the way, blending, and some other things.

But along the way, remember that the Commission actually asked us to question during the blending briefing as to why we aren't pursuing a comprehensive revision to Part 61. Staff prepared a paper, identified five options, told the Commission we would go out and shop it, come back after we heard.

And we went back and made a recommendation that activity be truncated, and the Commission approved that. So that option, that issue falls off the table,
so to speak.

And the only Rulemakings that we have are, 1, the one that's ongoing of course, and 2, we have the assignment to risk inform the waste classification table, currently, and unless that changes that would involve a Rulemaking. But those are the only Rulemakings that are in play and no comprehensive revision at this point given Commission direction.

MR. CAMERON: And do you want to go up there or do you want to --

MR. MOHSENI: I'll do it up there.

MR. CAMERON: Okay.

MR. MOHSENI: Well, thank you very much for the panel's discussion, very informative. We're back to revise everything we thought we knew to accommodate the new information we gathered this morning.

We had two major topics to discuss. We had Part 61 and the strategic assessment on Part 61. We heard very interesting comments, although we are not officially collecting any comments. It was mostly dealing with process, so that's welcome.

One of the items that dealt with process was get the draft of the guidance issued early or piecemeal so that people have time to look at a 500-page document, and you heard some discussions on that.
There was also a proposal, don't give us anything that's not a proposed rule. In other words be careful how unfocused we can become if you do not focus what is it that you are actually proposing, which we had some discussion on that as well. We had some clarification that the SRM language appears to leave open the issue of compatibility and perhaps some other issues to further discussion with the Commission after we get more public input, and that was all well discussed.

There was some discussion about role of Agreement States as co-regulators in Part 61. There was good discussion about the fact that we have Texas and South Carolina reps on the working group is viewed positively.

And States believed generally, the States represented here, that the engagement up until now has been well, but they recommend that the public engagement occur in sited States and allowing more closer people involved to actually participate.

We also hear that the low-level waste sites are national treasures and we should not underutilize the resource. We also heard the importance of the selection of scenarios for intruder assessment. It does a lot, hinges upon the type of scenario selected.

Making them risk informed was a suggestion,
and Low-Level Waste Forum indicated that they on behalf of the compacts will be providing input. Then we had a very animated discussion about the strategic assessment. While we had those four areas listed as questions, we had a hard time finding the slide that actually had it. And we did ask the question of how is the landscape changing. Folks on the panel did some good critical thinking and provided good input in terms of what about a gap analysis that would look at a scope of the nation in a way that it's much broader than just what NRC's interested in from its regulatory mission. And I think the first slide made that assumption that we are really looking at the landscape in the nation not just as at the NRC alone.

And indeed, good input we received from both the DOE and NEI and others on the panel that there was also a suggestion to utilize scenarios in strategic thinking, and the time horizon of five to seven years may not be adequate to capture the essence of the changes that might be needed to be thinking about in the next five to seven years, so it has to be a little bit of a bigger purview to be able to better focus on the five to seven years.

That's the interpretation I'm giving.

That was not stated exactly this way, but nonetheless
you have to be realistic in what's, a good discussion of what's urgent versus what's high priority. I think that priority list we had from 2007, as Larry indicated, reflected the priorities at the time and we often confuse at the NRC what's urgent versus what's high priority.

So the recognition of that was very well founded. We will indeed focus on high priority, always mindful of the urgent. If you knew how much that manifest is pressing us, the issuing the one sheet of paper that we need to open up, I mean that's taking more resources than actually addressing important issues that are important but not urgent. Nonetheless, that's our behavior and we stand right behind it.

There was a lot of good discussion on greater than Class C, very significantly insightful for us. And I really thank you, Christine and others on the panel, to shedding so much light on where we are in greater than Class C.

Although Christine remarked in her remarks that a subset of what constitutes greater than Class C would easily meet the requirements of proposed language in site-specific analysis, what she didn't capture is what about the pieces that don't fall and where would they end up. And is it the transuranic, we only have
three options. The high-level waste, transuranic, or
low level waste. So that may be something you may help
us with to better understand what that gap looks like.

But we talked about the relevance of the
classification tables. I mean there were a lot of good
thoughts that why not do away with the classification
tables as science has overtaken that. And there were
some good discussions of why you could still use the
greater than Class C without making it an obstacle to
the good science and allowing the States the flexibility
that they might need in terms of their internal
infrastructure of the regulatory frame that they have
in place.

And so being mindful of that is very
helpful. You guys provided that insight to us. We
talked about the financial responsibility versus
financial assurance, another concept well appreciated.
This is mostly for sealed sources.

Now the urgency of the sealed sources again
was forefront in this discussion from a national
security standpoint. The updating of the tables could
still occur without actually eliminating the table.
Apparently the necessity was described here that update
and bring good science to the table, that's another
input we got and we appreciate.
And then the DOE, Larry indicated that there would be future meetings between NRC and DOE to better understand the level of the plans, basically, about greater than Class C to better have an appreciation and understanding, and future workshops on this, which would be appear to be welcome by folks.

Then we talked about new technologies and new waste streams. And new technologies, I think a lot of good discussion occurred, but what I did not hear was at what point in the future do new technologies cause what is called waste today to become a resource, and therefore affect the waste stream in some ways that we can't anticipate yet. But that would be something one could pursue further.

Finalization of the staff guidance 20.2002 appeared to get much more attention than I thought. This was interesting. Good discussion on that. Good discussion on low activity waste and the consolidation of so many different pieces of stuff that could all be consolidated. That's certainly something worthy of investment.

Talked about the new DOE constructions of CERCLA facilities, potentially for the decommissioning of Paducah and Portsmouth and the impact that they may have on the landscape, basically, both in the private sector and capacity of if it doesn't go through how much
more capacity, or how much more volume will be heading
towards the existing sites and what does that do in terms
of available capacity to everything else. We
do need, a suggestion was made the non-reactor side of
the waste generators ought to be more involved in
providing, issue, comments, and that was well
appreciated.

When does rad material become waste? An
issue that clearly seems to be of interest to some folks
and use of the ANPR process. And I think that's my notes
to highlight some of the key aspects of what we heard
today.

MR. CAMERON: Great. Great summary, Aby.
And Boby said that he had something extremely important
to clarify.

MR. EID: Yes.

MR. MOHSENI: I'm sorry.

MR. CAMERON: You're not done yet.

MR. MOHSENI: I wasn't done.

MR. CAMERON: Sorry, Boby. Go ahead.

MR. MOHSENI: So next steps. You know,
obviously we'll have more outreach on this effort.
This assessment, this is as Greg said, this was the first
session we got together. We will have more workshops,
more opportunities for engaging the stakeholders and
the public at large.

And we will perhaps have a Federal Register Notice sometime issued as Melanie said in 2014, in a few months from now, requesting comments. And hopefully you will have a document by 2015, I think. That's for the strategic assessment.

For the low-level waste, for the Part 61, the next steps obviously was like you heard from Dave that it will take us about a year to be able to issue a proposed rule based on where we are, and there will be significant public engagement following that. And we expect to have workshops, at least one workshop if not more, and be able to get that to a final place.

Thank you.

MR. CAMERON: Thank you, Aby. And one other point is when will the transcript be available for people approximately?

(Off microphone comments)

MR. CAMERON: I'm sorry, Melanie, I should have brought you this so that you can get it on the transcript.

MS. WONG: So we should have it, in at least a month we should have it up in ADAMS.

MR. CAMERON: Okay, so it will be in ADAMS in a month. And Boby, can you give your clarification
very quickly for the people?

MR. EID: Yes, just something which is missing here, a reference point for safety, IAEA safety standard for waste disposal and the safety requirement. The safety requirement for the international community.

And the point of reference is they say that if it is less than one millisievert or 100 millirem, you do not need to optimize as accepted before waste disposal, and if it is two rem, this means you need to optimize. So that's their range for waste disposal.

So therefore I want to emphasize that currently the proposed safety criteria is appropriate, is good, is quite safe for protection of the public.

Thank you.

MR. CAMERON: Okay, thank you. And thank all of you. Thank the panel, great discussion. Thank everybody in the room, and I think we're adjourned.

(Whereupon, the meeting in the above-entitled matter was concluded at 12:57 p.m.)