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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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LOW-LEVEL RADIOACTIVE WASTE PROGRAM

+ + + + +

PUBLIC MEETING

+ + + + +

FRIDAY

MARCH 23, 2018

+ + + + +

The public meeting met in Room 211A,  
Phoenix Convention Center, 100 N. 3rd Street, Phoenix,  
Arizona, at 9:00 a.m., Richard Barkley, Meeting  
Facilitator, presiding.

PRESENT:

RICHARD BARKLEY, Region I, NRC, Meeting Facilitator  
MARIA ARRIBAS-COLON, Acting Chief, NMSS/DUWP/LLWB, NRC  
BOBY ABU-EID, NMSS, NRC  
MARC DAPAS, Director, NMSS, NRC  
STEPHEN DEMBEK, NMSS/DUWP, NRC  
KELLEEE JAMERSON, Project Manager, NMSS/DUWP/LLWB,  
NRC  
CHRIS MCKENNEY, Chief, Performance Assessment  
Branch, NMSS/DUWP, NRC

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GREGORY SUBER, NRR , NRC

ALSO PRESENT:

LARRY BERAN, Texas A&M AgriLife Research & Extension  
Center

ROB BLACK, Battelle Energy Alliance

FRAZIER BRONSON, Mirion Technologies

GERD BRUHN, GRS

LARRY CAMPER, Advoco Professional Services, LLC

CHAUMEIX NABIHA, CNRS

GARY DOOLEN, Los Alamos National Laboratory

CAMILLE ESPIVENT, IRSN

STEVEN FLANIKEN, Hazen Research, Inc.

BARBARA FREUND, BMUB

SONNY GOLDSTON, Jacobs Engineering Group, Inc.

HANS HONERLAH, U.S. Army Corps of Engineers

MIRIAM JUCKETT, Center for Nuclear Waste Regulatory  
Analyses

THOMAS KALINOWSKI, DW James Consulting

ASHOK KAPOOR, U.S. Department of Energy

SCOTT KIRK, Savannah River Remediation

THERESA KLICZEWSKI, U.S. Department of Energy

ALLAN LEE, Taiwan Power Company

MARK LEWIS, EnergySolutions

TODD LOVINGER, LLW Forum

BETSY MADRU, Waste Control Specialists, LLC

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CHARLES MAGUIRE, Texas Commission on Environmental  
Quality

JUSTIN MARBLE, U.S. Department of Energy

WILLIAM MASON, AWE

KYLE MOONEY, Idaho National Laboratory

TOM PEAKE, U.S. Environmental Protection Agency

DAVID PICKETT, Center for Nuclear Waste Regulatory  
Analyses

CHHANDA SAMANTA, Virginia Military Institute

ROGER SEITZ, Savannah River National Laboratory

MARK SENDERLING, U.S. Department of Energy

CHRIS SHAW, Waste Control Specialists, LLC

DAN SHRUM, EnergySolutions

GARRETT SMITH, U.S. Department of Energy

REBECCA STOHR, Australian Safeguards and Non-  
Proliferation Office

JOHN TAUXE, Neptune and Company

BILL WILMARTH, Savannah River National Laboratory

DIANE D'ARRIGO, Nuclear Information Resource Services\*

IAN IRVING, NRC\*

PHIL KLEVORICK, Clark County, Nevada\*

BRUCE BIWER\*

JOHN CONLY\*

KAY CUMBOW\*

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HARRY FELSHER, NRC\*

THOMAS MAGETTE, Talisman\*

CARDELIA MAUPIN, NRC\*

KATRINA MCMURRIAN\*

JOHN MITCHELL\*

MARTIN O'NEILL\*

JANET SCHLUETER, NEI\*

DAN SCHULTHEISZ, U.S. Environmental Protection Agency\*

ANDREW TACHOVSKY\*

JOHN TAPPERT, NRC\*

JAMES CROWSON\*

DON LOWMAN, NRC\*

LISA MATIS\*

NEIL SHEEHAN, NRC\*

ELIZABETH ZIMMER-LLOYD\*

\*PARTICIPATED VIA TELECONFERENCE AND/OR WEBINAR

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

9:00 a.m.

1  
2  
3 MR. BARKLEY: All right, if we can get  
4 started, please? Can everybody hear me in the back  
5 okay?

6 My name is Richard Barkley, I'm the  
7 meeting facilitator for this meeting. I'm actually  
8 from the Region I office. I'm not affiliated with the  
9 NMSS organization at all.

10 The NMSS staff here today has an overview  
11 and two presentations to make to you today. After  
12 each of the two presentations, I'll open the floor up  
13 to questions, and I'll go and call on probably half a  
14 dozen people from the room.

15 And then, I'll move to the webinar and  
16 then come back to the room, depending on how many  
17 questions I see in the room itself. Okay?

18 I would ask that you keep your remarks  
19 concise. There's a number of people here to speak,  
20 and so, we do have somewhat of a limited amount of  
21 time.

22 I am a very flexible facilitator, but I  
23 need to try to constrain remarks a bit to be concise  
24 so everybody has a chance to speak.

25 I would ask that, since this meeting is

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1 being recorded, the first thing you do is speak up and  
2 say your name because the individual in the back needs  
3 to be able to record your name. And, after he records  
4 it, it'll eventually later be transcribed. Okay?

5 The staff will be available after the  
6 meeting in case you do have questions and we don't get  
7 to all your questions. And, this is, by all means,  
8 not the only way you can provide comments on these  
9 subjects.

10 I would ask that you be respectful to the  
11 individuals when they're speaking and not interrupt  
12 them as we go through. And, I'd appreciate your  
13 cooperation in that matter.

14 If you have any questions, I'll be roaming  
15 around the room. Please come see me privately and I  
16 will be glad to address them.

17 Do we have any questions at this time  
18 about the format of the meeting?

19 (NO RESPONSE)

20 MR. BARKLEY: Okay, with that, what I'd  
21 like to first do it have Cedric on the bridge speak a  
22 little bit about the operation of the phone bridge so  
23 our attendees on the phone bridge understand how this  
24 will work.

25 Cedric, can you speak up for a minute.

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1 OPERATOR: Yes, as a reminder, if you'd  
2 like to ask a question from the phone lines, please  
3 press star then one. Please remember to unmute your  
4 line and record your name clearly when prompted.

5 If you'd like to withdraw that questions,  
6 you may press star two.

7 Once again, if you'd like to ask a  
8 question from the phone lines, please press star then  
9 one.

10 MR. BARKLEY: Okay, thank you.

11 With that, I believe Marc Dapas, the  
12 Director of the Office of Nuclear Material Safety and  
13 Safeguards would like to speak to you.

14 MR. DAPAS: Thank you.

15 Well, good morning, everyone, and I want  
16 to thank you for being here this morning to engage in  
17 what I hope are some meaningful discussions on a  
18 couple of very important topics.

19 You know, I woke up this morning and was  
20 looking at the latest news and saw that the Senate did  
21 pass this morning a \$1.3 trillion omnibus spending  
22 bill. The House had voted on that bill Thursday  
23 evening.

24 And, I saw that President Trump has  
25 indicated in a tweet that he may veto the bill because

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1 it doesn't address the DACA issue, and of course,  
2 provides sufficient funding for a wall in Mexico.

3 My point being, not clear to me whether  
4 this may be the last official activity I'm involved in  
5 before the government shuts down at midnight.

6 (LAUGHTER)

7 MR. DAPAS: But, let's hope not.

8 We consider public involvement in our  
9 activities to be a cornerstone of strong, fair  
10 regulation of the nuclear industry. Openness is one  
11 of the NRC's principles of good regulation.

12 And, we recognize the public's interest in  
13 the regulation of nuclear activities and we provide  
14 opportunities for stakeholders to be heard.

15 For that reason, we are committed to  
16 providing opportunities for meaningful public input  
17 and to participate in our decision making process.

18 The topics that we will be presenting this  
19 morning are of great interest. We plan to provide  
20 presentations on -- they're of great interest, of  
21 course, to the waste management industry, our public  
22 stakeholders and federal agencies.

23 And so, we plan to provide presentations  
24 on the overview of the NRC's low-level radioactive  
25 waste program, the very low-level waste scoping study

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1 that we are conducting and greater than Class C and  
2 transuranic waste disposal.

3 As directed by the Commission, we are  
4 developing a regulatory basis for the disposal of  
5 greater than Class C and transuranic radioactive waste  
6 through means other than deep geologic disposal.

7 We are tasked with providing that  
8 Commission directed deliverable six months after we  
9 publish the proposed supplemental rule on Part 61.

10 We're not submitting that -- our proposed  
11 regulatory basis for approval. But, of course, the  
12 Commission could turn that into a vote paper if they  
13 consider that to be a policy matter.

14 But, we are planning to forward that  
15 regulatory basis in a Commission information paper.

16 In addition, we initiated the very low-  
17 level waste scoping study to identify possible options  
18 to improve and strengthen our regulatory framework for  
19 that type of waste disposal.

20 On February 22nd, we held a similar public  
21 meeting at our headquarters office back in Rockville,  
22 Maryland to discuss technical issues associated with  
23 the development of a regulatory basis for the disposal  
24 of greater than Class C waste as I described  
25 previously, and to discuss the scoping study for very

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1 low-level waste.

2 Several of you may have participated in  
3 that meeting either in person or by phone or via  
4 webinar. And, if so, we certainly welcome you hear to  
5 provide any additional insights that you have.

6 The goal of our meeting is to gain  
7 insights from you on various issues that should be  
8 considered in the development of the regulatory basis  
9 for greater than Class C.

10 As I understand it, we've developed a  
11 technical basis document and we're interested in any  
12 views that you may have regarding the various aspects  
13 that we discuss in that document.

14 And, we also want to receive your  
15 perspectives on the opportunities to improve and  
16 strengthen our regulatory framework for the management  
17 of very low-level waste.

18 Your input regarding both of these  
19 important topics is important to us. And, we invite  
20 you to participate in the meeting by sharing your  
21 comments and views at the designated times on the  
22 agenda.

23 And, again, I want to thank you for taking  
24 the time here on a Friday morning. Some of you I  
25 believe attended the waste management symposia this

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1 week and a lot of good discussion on some of the  
2 topics that we will be engaging on today.

3 And, again, we look forward to your  
4 comments and the input that you provide after each of  
5 the presentations that we will deliver to you.

6 So, with that, I'll close and turn it back  
7 over to Mr. Barkley.

8 Thank you.

9 MR. BARKLEY: Okay, thank you.

10 At this point, we'll move to our first  
11 speaker.

12 MR. DEMBEK: Hello, everyone. I'm Steve  
13 Dembek. I am a Project Manager in working under  
14 Marc's organization. And, my specific area is Part  
15 61, so I'm going to give you an overview on a couple  
16 of items.

17 And, we said this is going to be a -- just  
18 a brief overview and then the main reason we are here  
19 today is to listen to Kellee Jamerson talking about  
20 the very low-level waste scoping study and Chris  
21 McKenney talking about greater than Class C waste  
22 regulatory basis development.

23 With that, next slide? Yes, thank you.  
24 No, that slide, sorry. It's very confusing. No, not  
25 that one. The outline slide. Okay, no, you were

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1 right, keep going.

2 So, the status of the Part 61 rulemaking,  
3 for those of you that are totally unfamiliar with this  
4 issue, the issue itself began back in 20015 with the  
5 question of large quantities of depleted uranium,  
6 could they safely be disposed of in the low-level  
7 waste facilities that were currently operating in this  
8 country?

9 The rulemaking effort started back in  
10 2009. The Commission directed the staff to start  
11 rulemaking on this issue.

12 So, as you can see, this issue has been  
13 going on for quite some time now. And, we're not  
14 finished yet.

15 So, going back to this slide, the staff  
16 developed a proposed rule and associated draft  
17 guidance and issued it for public comment in the  
18 Federal Register back in March of 2015. And,  
19 publishing the proposed rule for comment resulted in  
20 numerous written and oral comments.

21 Overall, the staff had to analyze and  
22 respond to about 850 comments. The staff evaluated  
23 those comments, made revisions to the proposed rule  
24 and developed a draft final rule.

25 The draft final rule was -- had numerous

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1 changes from the proposed rule and, because it changed  
2 again, I'm not going to get into all of those changes  
3 that occurred back then. I'll talk more about the  
4 more recent changes.

5 So, the draft final rulemaking package was  
6 provided to the Commission in September of 2016 and it  
7 became publically available later that year in October  
8 2016.

9 And, as you can see, there is the ML  
10 number for those of you familiar with the NRC ADAMS  
11 system, there's the ML number there if you're  
12 interested in looking at that.

13 We also met, and these are all available,  
14 too, on our website.

15 We also met with the NRC's Advisory  
16 Committee on Reactor Safeguards. And the Advisory  
17 Committee on Reactor Safeguards gave their input to  
18 the Commission on this draft final rule.

19 And, based on what was given to the  
20 Commission, the Commission thought that over and came  
21 up with a staff requirements memorandum that was  
22 issued on September 8th, 2017.

23 And, before I go on to the next slide, we  
24 also have a guidance document that was published that  
25 accompanied this -- the draft final rule that was

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1 issued in 2016. And, that is NUREG-2175, and that was  
2 also in draft form and that was made publically  
3 available so people can look at that and comment on  
4 that.

5 And, all these documents can be found on  
6 the NRC's public website, through the NMSS website or  
7 they can be found in ADAMS.

8 Next slide, please?

9 So, this SRM, SECY-16-0106 is the SRM that  
10 directed the staff to make changes to the draft final  
11 rule that we proposed back in 2016. So, in this staff  
12 requirements memorandum, the Commission directed the  
13 staff to make substantive revisions to the draft  
14 final.

15 And, that was given to the Commission in  
16 September 2016 and, subsequently, to republish it as a  
17 supplemental proposed rule for a 90-day public comment  
18 period.

19 And, on my next slide, I'll discuss the  
20 direction given to the staff in the SRM.

21 So, now, I would like to discuss some of  
22 the changes that the Commission directed the staff to  
23 make in that SRM. So, I'm going to go around through  
24 the ovals here.

25 The SRM directed substantive revisions to

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1 the draft final rule and the subsequent publication,  
2 as I just mentioned, and the associated guidance  
3 document, which as I mentioned before is NUREG-2175,  
4 must also be revised and should be made publically  
5 available concurrent with the comment period on the  
6 supplemental proposed rule.

7 The SRM reinstates the first significant  
8 change in the SRM. The SRM reinstates the use of a  
9 case by case basis, in other words, the grandfather  
10 provision, for applying new requirements to only those  
11 sites that plan to accept large quantities of depleted  
12 uranium for disposal.

13 It reinstates the 1,000 year compliance  
14 period. And, the previous rule had a 1,000 and 10,000  
15 year compliance period with a specific dose limit of  
16 25 millirem per year that's consistent with the  
17 previous draft rule.

18 And, it adopts a longer period of  
19 performance assessment, the period of which will be  
20 based on site specific considerations and a reasonable  
21 analysis, which the reasonable analysis was defined in  
22 another SRM.

23 The changes in the SRM also clarify that  
24 the safety case consists of the quantitative  
25 performance assessment, which I just mentioned, as

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1 supplemented by consideration of defense in depth  
2 measures.

3 And, speaking of defense in depth  
4 measures, the SRM required the staff to modify the  
5 draft final rule text addressing defense in depth to  
6 narrow its consideration solely to providing  
7 additional assurance in mitigating the effects of  
8 large uncertainties that are identified during the  
9 performance assessment.

10 And, lastly, it requires the final rule to  
11 be informed by broader and more fully integrated but  
12 reasonably foreseeable cost and benefits to the U.S.  
13 waste disposal system resulting from the proposed rule  
14 changes, including pass through costs to waste  
15 generators and waste processors.

16 And, regarding that last step that I just  
17 mentioned, the staff did hold a public meeting on that  
18 and the staff did issue a Federal Register Notice on  
19 that, so we have received comments on that.

20 And, the staff is currently considering  
21 those comments and determining the best way to respond  
22 to those comments and address them in our next  
23 rulemaking document.

24 So, for the next step, the staff is  
25 currently working on revised rule language to

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1 incorporate the direction provided by the Commission  
2 in their September 2017 SRM. The staff will give the  
3 supplemental proposed rule to the Commission for their  
4 information, as Marc mentioned.

5 And, it will then be issued for the 90-day  
6 public comment period.

7 And, after the 90-day public comment  
8 period, the staff will assess the comments that we  
9 receive and the staff will consider those comments and  
10 develop a draft final rule for the Commission's  
11 consideration.

12 Next slide, please?

13 So, that was my discussion on the update  
14 of Part 61. And, when I'm done with my presentation,  
15 I'll be happy to try to answer any questions you might  
16 have on that.

17 But, before I get into that, before I  
18 finish up, there is the one issue on 10 CFR 20.2002,  
19 Alternative Disposal Request Guidance.

20 And, for those of you in the audience not  
21 familiar with 10 CFR 20.2002, for very low levels --  
22 for radioactive waste that has very low levels of  
23 activity, there's some alternate paths that a licensee  
24 may choose to try to get for disposal.

25 Say, at a different waste disposal site,

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1 or in some cases, they might be able to use a  
2 recycling or use of material. But, these have to be  
3 approved on a case by case basis.

4 So, in 2009, the staff issued guidance on  
5 alternative disposal options. And, this was the first  
6 single procedure covering safety and security reviews,  
7 the preparation of an environmental assessment and  
8 coordination with stakeholders for alternative  
9 disposal requests.

10 This draft interim procedure was issued  
11 with a plan to finalize it after it was used for a  
12 while and we received feedback on its use.

13 The staff has now revised the draft  
14 guidance with the purpose of providing more clarity,  
15 consistency and transparency and clarifying the NRC's  
16 position regarding disposal, reuse and recycling of  
17 this material.

18 On October 19th of 2017, the NRC issued  
19 for a 60-day public comment period the staff's  
20 proposed revision to this guidance document.

21 The comment period expired but was  
22 extended and it expired again on January 17th of 2018.

23 So, at this point, the staff is currently  
24 assessing all the comments received and determining  
25 the necessary changes that need to be made to the

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1 guidance document to account for these comments.

2 The final alternative disposal request  
3 guidance is expected to be issued later this year.

4 Next slide?

5 And, with that, that completes the brief  
6 overview. Again, the main purpose of this meeting is  
7 the very low-level waste scoping study and the greater  
8 than Class C waste regulatory basis development.

9 But, I'd be happy to answer any questions  
10 you might have on the status of these two issues.

11 MR. CAMPER: Thank you, Steve.

12 Larry Camper, NRC retired, Advoco  
13 Professional Services.

14 On the SRM that you mentioned that  
15 assignment number five where the staff was directed to  
16 go determine more cost information, including past  
17 through costs.

18 Two points, one, what's your impression?  
19 I mean, obviously, a reg analysis was done as part of  
20 the rulemaking, but the Commission wanted more.  
21 What's the staff's impression of what the Commission  
22 was looking for? And, how's it going with regards to  
23 getting the pass through of cost information?

24 MR. DEMBEK: Yes, I'm struggling because I  
25 don't want to say, thank you, Larry, to that.

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1 (LAUGHTER)

2 MR. DEMBEK: I hesitate on that. It's an  
3 interesting question, Larry, I'll put it that way.

4 We didn't get that many public comments on  
5 that. And, but, we did get some comments that will  
6 help us in that direction.

7 I think there was some feedback during  
8 this process that we didn't adequately consider the  
9 costs that would be passed on to say producers of  
10 depleted uranium that would have to dispose of this  
11 material in the long-term.

12 And, I think the Commission wanted us to  
13 make sure that we considered that in the regulatory  
14 analysis part of the rulemaking effort.

15 And, we are -- we have not finalized an  
16 updated regulatory analysis based on those comments,  
17 so we're still thinking that over, still thinking  
18 about the comments we received.

19 MR. CAMPER: So, a footnote. So, on the  
20 pass through question, are you getting meaningful  
21 information from operators, waste generators, et  
22 cetera, or not?

23 Obviously, it's a proprietary sensitive  
24 thing, it's a tough call for the staff to do this.  
25 I'm just curious how that's going?

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1 MR. DEMBEK: We got a few comments. I  
2 don't recall at this time how worthwhile those  
3 comments are, how helpful those comments are, I don't.

4 But, we did get comments and we did get  
5 some additional information that will help us.

6 Yes, anyone else?

7 Yes, Marc?

8 MR. DAPAS: Larry, I just wanted to add,  
9 you know, in providing the proposed rule to the  
10 Commission, they had the opportunity to see the public  
11 comments that we received. You know, we had various  
12 stakeholder engagements there.

13 And, the Commission has the opportunity to  
14 see how we disposition those public comments. And,  
15 based on the opportunity I had at the Office Director  
16 level during periodic meetings with individual  
17 Commissioners, I think they wanted to ensure that the  
18 staff had done as thorough a job as they could in  
19 assessing the various cost considerations there.

20 And, obviously, asked us to consider pass  
21 through costs. And, there had been stakeholders that  
22 suggested that should be considered as part of the  
23 staff's cost benefit analysis.

24 So, I would offer, it was direction by the  
25 Commission to make sure we were as thorough and

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1 complete as we could be in considering the costs of  
2 that rule and the impact on the associated  
3 stakeholders.

4 MR. DEMBEK: Yes?

5 MR. SEITZ: This is Roger Seitz from  
6 Savannah River National Lab. And, I guess maybe a  
7 difficult question, but not too probing.

8 Any sense of when the new Part 61 will  
9 come out?

10 MR. DEMBEK: Well, like the twenty 2002  
11 guides, we're also hoping to get that done later this  
12 year. I think that's the best estimate I can do at  
13 this time.

14 (OFF MICROPHONE COMMENTS)

15 MR. DEMBEK: The question was, when will  
16 the staff complete the 10 CFR Part 61 supplemental  
17 proposed rule?

18 And, the answer, as you heard was that I'm  
19 not sure but we're hoping to get that done later this  
20 year.

21 MR. CAMPER: Larry Camper, Advoco  
22 Professional Services.

23 Another challenging issue for the staff, I  
24 think, was task number one in the SRM, this idea of  
25 the grandfathering provision.

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1 I know, Marc, you spoke to this the other  
2 day when it came up. But, I think it's worthwhile in  
3 this setting just to vet it a little bit.

4 I mean, the challenge that I see is that  
5 the staff was directed to use the grandfathering  
6 provision and apply it to those states that do not  
7 intend to take, in the future, large quantities of  
8 depleted uranium.

9 And, on the surface, that sounds fairly  
10 straightforward. But, I think it's a little more  
11 complicated than that for two reasons.

12 One, when the grandfathering provision was  
13 in there before, there were certain actions that were  
14 taken by the states at that time, that is they adopted  
15 Part 61.

16 And so, when I read case by case, it  
17 implies that something is to be done, whatever that  
18 something is. And so, I'm curious as to what you're  
19 thinking on what that something is?

20 But, the other part that kind of  
21 perplexing is, the rule contains compatibility  
22 associated with it for the various parts of the  
23 regulatory language.

24 But, yet, the Commission seems to be  
25 telling the staff that those states that don't intend

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1 to take large quantities of DU in the future, are not  
2 subject to those compatibility requirements.

3 So, it's a difficult assignment for the  
4 staff, I think. And, I know, Marc, you mentioned  
5 you're going to explore communication with the  
6 Commission.

7 So, anything you can say about that would  
8 be appreciated.

9 Thank you.

10 MR. DAPAS: Maybe I should hold the mic.

11 (LAUGHTER)

12 MR. DAPAS: Thanks for the question,  
13 Larry.

14 As I indicated yesterday during one the  
15 technical sessions at the waste management symposia,  
16 we do have, and you referenced this in your slide, we  
17 asked the Commission via what we call a COMSECY,  
18 Commission SECY paper, to provide some clarification.

19 As you've indicated, reinstate the  
20 grandfather provision, one could offer would refer to  
21 the current Part 61 framework where there was  
22 reference to a grandfather provision. And, that was  
23 to address, at the time, Part 61 rule was developed.

24 There was the recognition of the impact on  
25 some of the existing facilities and there were various

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1 license conditions that were imposed.

2 So, reinstate the grandfather provision  
3 would, you know, would appear to be, you know,  
4 backward looking in the context of, can the regulator,  
5 let's say an Agreement State regulator decide that the  
6 new requirements will not apply for a given facility.

7 Then, when you add the language for those  
8 sites that plan to acquire large quantities of  
9 depleted uranium, that is a going forward.

10 So, it begged the question, does the  
11 grandfather provision only apply to those sites that  
12 plan to acquire large quantities of depleted uranium  
13 in the future? Or, does it apply to sites right now  
14 that have depleted uranium inventories for which they  
15 do not plan to acquire large quantities of depleted  
16 uranium in the future?

17 So, point being, we laid out various  
18 options in how that particular SRM provision could be  
19 interpreted and we've asked for Commission  
20 clarification and the Commission is evaluating that  
21 right now. So, it, obviously, would have  
22 implications.

23 And then, the other aspect is, reinstate  
24 the grandfather provision, was it intended to be for  
25 the entire set of requirements in the new rule or is

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1 it provision by provision? So, that was another, you  
2 know, you develop a matrix, it can make your head hurt  
3 a little bit there with the different options.

4 But, we did provide that by way of  
5 transparency with the Commission in terms of how it  
6 might be interpreted. We're waiting for feedback from  
7 the Commission and then we'll decide. And, we'll  
8 obviously implement that direction.

9 Hope that helps.

10 MR. CAMPER: What' the date of the COMSECY  
11 you referenced?

12 MR. DAPAS: Yes, I don't think we have the  
13 COMSECY date handy. We can get that for you.

14 MR. DEMBEK: I didn't have that.

15 MR. CAMPER: It's not publically available  
16 since it's obviously pre-decision guidance.

17 Thank you.

18 MR. DEMBEK: Do we have another question?

19 OPERATOR: We do have a question from the  
20 phone line.

21 Diane D'Arrigo, your line is open.

22 MS. D'ARRIGO: Thank you.

23 Hi, this is Diane D'Arrigo, Nuclear  
24 Information Resource Service.

25 This is actually a question for whoever's

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1 running the phone lines. I don't really think it's  
2 possible to hear. I don't know if other people are  
3 having the same problem, but it sounds very, very  
4 quiet and I'm wondering if it's possible to raise the  
5 volume so I've got all my volumes on maximum. I would  
6 appreciate it if that could --

7 It's especially difficult for the people  
8 who are not -- it sounds like there's some people who  
9 are maybe on the panel up front and then there are  
10 people in the audience that are going to a microphone.

11 You can't hear.

12 MR. DEMBEK: Okay, thank you, Diane, we'll  
13 try to be clearer with our phone conversation. Thank  
14 you.

15 MS. D'ARRIGO: Well, I'm asking if the  
16 phone system could raise the volume because I don't  
17 think people are going to remember to yell and you  
18 don't want to yell when you're in a meeting.

19 So, if it's possible for the phone  
20 managers to raise the volume, it just would be very  
21 helpful.

22 MR. DEMBEK: Okay, we will look into that,  
23 Diane, thank you.

24 (OFF MICROPHONE COMMENTS)

25 MR. SHRUM: So, we're going to try this.

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1 I'm a public commenter and I've come up to the podium  
2 and people on the phone may want to voice if you can  
3 hear better if somebody comes to the podium.

4 My comment on this --

5 PARTICIPANT: Name?

6 MR. SHRUM: Oh, is that important? My  
7 name is Dan Shrum, I work with Energy Solutions.

8 My comment on the grandfather clause is  
9 this, a lot of things happened with the Part 61 rule,  
10 and one of the things that happened was the  
11 grandfather clause was actually removed without any  
12 public comment on whether or not the grandfather -- on  
13 that clause should be removed or not.

14 That was not removed in the draft, it was  
15 not removed until the final came out and suddenly, it  
16 just disappeared. So, that's my first comment and  
17 that's kind of the challenge.

18 The second part of it is, it used to be  
19 there. There were no compatibility issues with it  
20 being there. And, all we're -- a lot of us, all we're  
21 asking is, allow those facilities that do not want to  
22 take significant volumes of depleted uranium to  
23 continue operating under their current regulatory  
24 regime so that they can remain in business and  
25 continue on their operations.

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1                   Because, what they're doing today was  
2 specifically authorized and evaluated during the  
3 development of Part 61.

4                   So, Part 61 is flexible enough, I believe,  
5 because we operate a facility that can only take Class  
6 A waste and that falls within Part 61, that's okay.  
7 So, why not allow a facility that doesn't want to take  
8 long-lived isotopes such as depleted uranium to  
9 continue operating. You don't have to take it all.

10                   MR. DEMBEK: Thank you, Dan.

11                   So, just to respond to the first part of  
12 Dan's comment, the grandfathering clause was initially  
13 put into the regulation, 10 CFR Part 61, because 10  
14 CFR Part 61 did not exist, but there existed some low-  
15 level waste sites already.

16                   So, when the staff imposed that new  
17 regulation, we did not want to get into a situation at  
18 that time where these licensees were instantaneously  
19 in violation of NRC requirements.

20                   So, we put in this grandfathering clause  
21 case by case basis where the states could say, well,  
22 we can't implement this part of the regulation at this  
23 time, but we can do that in several years, so we'll  
24 work toward that.

25                   And, eventually, all the sites came into

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1 compliance with their Agreement State equivalent  
2 regulations to the NRC Part 61. So, at that time,  
3 basically, the grandfathering clause was no longer in  
4 use because it had become OBE, basically, overcome by  
5 events. It was no longer needed.

6 So, that's just for the background for  
7 some people who don't know the issue behind why that  
8 was there.

9 So, when you say the staff deleted that in  
10 the rulemaking process without any public notice, it  
11 was deleted because it was no longer needed and we  
12 thought it was confusing because some people thought  
13 it was still being used.

14 So, that's just a little background there.

15 MR. BARKLEY: Let's try standing up and  
16 speaking as loudly as we can.

17 MS. EDWARDS: This is Lisa Edwards with  
18 EPRI.

19 If they had not used the word reinstate,  
20 if they had used terminology that said, provide a  
21 grandfather clause for sites that were not going to  
22 take additional quantities of depleted uranium or  
23 large quantities of that, would that remove the  
24 ambiguity or the confusion?

25 MR. DEMBEK: Okay, the question was, if

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1 the Commission worded their SRM differently, instead  
2 of saying reinstate, if they just said, add a new  
3 grandfathering clause to the regulation, would that  
4 resolve the problem?

5 Well, part of the problem is then deciding  
6 which regulations a licensee would have to comply  
7 with.

8 So, let's say you had certain regulations  
9 about the waste classification, say, but if you're  
10 going to do a site specific analysis, you could either  
11 use the waste classification tables or you could use  
12 your site specific analysis.

13 But, if you were grandfathered, then you  
14 could only use the waste classification tables.

15 And, it got into a potential confusion  
16 area of, how could we say, you are grandfathered to  
17 this rule and this rule and this, but not this rule  
18 because we didn't change that rule.

19 And, it just got to the point of potential  
20 confusion. So, the staff is currently working through  
21 that issue.

22 MR. SUBER: Okay, so, this Greg Suber.

23 We appreciate your comments on  
24 grandfathering, but I just want you to bear in mind  
25 that --

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1                   Okay, this is Greg Suber.

2                   We appreciate your comments on  
3 grandfathering. I just want you to bear in mind that,  
4 once we have drafted the proposed rule, it will be  
5 issued for public comment.

6                   And, it's kind of difficult for us to sit  
7 here and pontificate or guess about which way the  
8 Commission is going to direct us or redirect us or  
9 respond to the COMSECY, so on and so forth.

10                  So, even though I appreciate a lot of your  
11 comments and we're welcome to have the comments, to  
12 guess and speculate about what it's going to look like  
13 in the upcoming months is really not a very productive  
14 exercise.

15                  So, I just wanted to say that so we can  
16 move on with the rest of the meeting.

17                  Thank you.

18                  MR. DEMBEK: Operator, any other questions  
19 on the phone?

20                  OPERATOR: I'm seeing no questions on the  
21 phone line at this time.

22                  MR. DEMBEK: No questions on the phone.  
23 Any questions -- any other questions?

24                  MR. DAPAS: I have one last comment I do  
25 want to make.

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1 MR. DEMBEK: Right. Let's bring you up  
2 front.

3 MR. DAPAS: This is Marc Dapas, Director  
4 of the Office of Nuclear Material Safety and  
5 Safeguards.

6 One comment on that grandfather, as Steve  
7 -- grandfather provision, as Steve indicated, the  
8 staff proposal to the Commission did not include a  
9 grandfather provision.

10 The staff was proposing that the current  
11 inventory of depleted uranium, that mixed waste stream  
12 that had not been fully contemplated in terms of the  
13 quantities that are possessed at some of the disposal  
14 facilities, was not considered, right, when the rule  
15 was first promulgated in, what, was it 1982.

16 There are additional waste streams that we  
17 were attempting to address with the new Part 61 rule.

18 So, the staff did not propose a grandfathering  
19 provision because the grandfather provision that  
20 currently exists in the rule was applied to the  
21 facilities that existed at the time.

22 And, as Steve has articulated, it obviated  
23 the need to include the grandfather provision in the  
24 current rule.

25 The Commission weighed in, as is

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1 appropriate as a policy setting body for the NRC, and  
2 directed the staff to reinstate the grandfather  
3 provision.

4 For the reasons that we've articulated, it  
5 was not clear what was the Commission's intent. And,  
6 that's why we have asked the Commission, please  
7 provide clarification to the staff so we can proceed  
8 going forward with the appropriate incorporation of a  
9 grandfather provision.

10 So, I hope that helps provide some  
11 clarity. And, as Greg mentioned, when that proposed  
12 supplemental rule is published, which will incorporate  
13 the direction we receive from the Commission regarding  
14 the clarity that they'll provide on the grandfather  
15 provision and large quantities of depleted uranium  
16 going forward, et cetera, then we will implement that  
17 direction and the public will have an opportunity to  
18 comment on that proposed supplemental rule.

19 So, I do appreciate the interest in that  
20 subject matter area. It's a very important area. I  
21 appreciate the comments by Dan in terms of how you  
22 would like to see that applied.

23 And, there are various stakeholder  
24 comments and reviews on how a grandfather provision  
25 should be applied and the need for it.

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1           And, all that will be considered as we go  
2 forward as part of the supplemental proposed rule.  
3 Public comment period before we would go forward with  
4 a finalized rule, which, again, would receive another  
5 opportunity for the Commission to weigh in before that  
6 final rule is issued.

7           So, thanks for your interest in that  
8 subject matter. And, if we could move on to other  
9 areas associated with the presentation.

10           So, thanks.

11           MR. BARKLEY: Okay, thank you.

12           We'll move on to our next presenter in  
13 there at this point in time, Steve?

14           MR. DEMBEK: Thank you all for those  
15 interesting questions. Appreciate it.

16           MR. BARKLEY: We do have another question  
17 up on the system here, if you can answer this, please?

18           MR. DEMBEK: Okay, we have a question on  
19 the webinar. Has the staff request to the Commission  
20 on grandfathering been submitted? And, if not, when  
21 and will it be made public?

22           So, Marc had covered this topic already.  
23 The COMSECY was submitted to the Commission, it has  
24 not been made public. When will it? I don't know.  
25 It's pre-decisional right now.

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1 Will it be made public later? I can't  
2 say, I don't know. It's pre-decisional, but it has  
3 been issued to the Commission. The Commission is  
4 considering that and has not responded to the staff  
5 yet.

6 MR. BARKLEY: Okay, thanks, Steve.

7 Let's move to the next presenter here on  
8 greater than Class C waste.

9 And, I think when we go to the questions,  
10 let's try, if you're near the edge, maybe you can come  
11 up to the microphone and say it so the people on the  
12 phone can hear it.

13 And, if you're near the middle and you're  
14 tied up, I'll bring the microphone to you. We'll have  
15 the speaker reiterate your question, summarize it so  
16 the people on the phone can hear it.

17 Because, roughly, a quarter of all the  
18 attendees at this meeting are on the phone. So, I  
19 want to be fair to everyone.

20 MR. MCKENNEY: Okay, welcome.

21 I'm here to talk about one of the other  
22 Commission directions that has been given to the staff  
23 during this time period that we got a couple years  
24 ago.

25 With that -- because this was a request by

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1 the waste control specialist in Texas, the State of  
2 Texas reached out to the NRC a couple years ago to ask  
3 what was the level of ability of an Agreement State to  
4 regulate the disposal of greater than Class C in a  
5 shallow or near shallow -- sorry -- surface or near  
6 surface disposal facility, because WCS is nowhere near  
7 shallow.

8 So, the staff proceeded to write some  
9 papers on the history and the scope of greater than  
10 Class C and transuranic waste, which also gets  
11 involved in this.

12 And so, for today's meeting, we're looking  
13 to talk about some of the technical issues that we've  
14 been looking at and looking for input from the -- from  
15 you to find, is there other things that we need to be  
16 looking at as we build the regulatory basis that's  
17 been requested by the Commission?

18 And, next slide?

19 So, low-level waste is divided in several  
20 classes. Of course, all the waste is define by what's  
21 not. It's not high-level waste. It's not byproduct  
22 material or uranium mill tailings.

23 The -- I'm hesitating on transuranic  
24 waste, because in different things it's been defined  
25 sometimes within the definition and sometimes not.

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1                   Currently, in Part 61, transuranic is  
2 listed as an exclusionary definition.

3                   But, low-level waste itself has been split  
4 into subcategories. The normal ones for disposal at a  
5 facility are Class A, B and C. The following talk  
6 will be on very low-level waste which will be on the  
7 lower end of Class A.

8                   The greater than Class C is then the --  
9 any waste that has got higher concentrations than are  
10 listed in the table for protection of the intruder.

11                   And, within the regulations, based on the  
12 analysis we did in 1981 which used trench based  
13 technologies to evaluate what the appropriate  
14 concentrations were for near surface disposal.

15                   Next slide?

16                   So, in 2015, we got a letter from Texas  
17 because they got a letter from WCS requesting what is  
18 the level of clarification on authority to regulate  
19 greater than Class C.

20                   We created a paper to the Commission, as  
21 this was a policy decision. There had been previous  
22 discussions which is discussed in detail in this paper  
23 on, back in '89, on the issue not on authority, but on  
24 what is greater than Class C waste and where should it  
25 go?

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1           Then, we had a staff requirements memo  
2 that came out and directed the staff to provide a  
3 regulatory -- to develop a regulatory basis for  
4 disposal of GTCC through means other than deep  
5 geologic disposal.

6           In looking at this authority, we're  
7 looking at what is the waste, one? Appropriate for  
8 disposal on near surface disposal? Is there a small  
9 fraction or some parts of it that are not?

10           If it is available for near surface  
11 disposal, can an Agreement State have the authority to  
12 regulate that disposal?

13           Or, does its hazard raise to the point  
14 that there is, in the part of the Atomic Energy Act  
15 which delineates between Agreement States and the NRC  
16 responsibilities where, if it's too great of a hazard,  
17 NRC doesn't hand that over to the Agreement State.

18           Examples of that are like fuel facilities  
19 and what are most in all Agreement States, but, the  
20 NRC regulates them.

21           Then, one of the other things was, again,  
22 as I said, the Part 61 has a transuranic listed in the  
23 exclusionary waste definition, but later in '85,  
24 Congress had taken transuranic out of the definition.

25           So, we need to resolve that along without

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1 even a definition of transuranic to Part 61.

2 The -- when the most recent SECY on Part  
3 61 came out of the proposed -- when we went up with  
4 the draft final rule, they redirected the timing of  
5 this regulatory basis to be six months after the  
6 publication of this supplement proposed rule.

7 Next slide?

8 So, we're not on this slide yet, actually.

9 If you actually say where we are today? Because the  
10 staff is current well into the -- is well trying to do  
11 completing the Part 61 supplemental rule.

12 Technically, then we'll have public --  
13 another set of public engagement beyond today on the  
14 actual draft regulatory basis.

15 So, right now, we're trying to ask for  
16 your feedback on what's sort of stuff should be in it?

17 Then, we'll build it and then we'll come back out and  
18 talk about your comments on the actual regulatory  
19 basis.

20 And then, in the future, after that, we'll  
21 find out to the degree that we have to do a rulemaking  
22 on GTCC.

23 Next slide?

24 So, with the release of -- for this  
25 section of requests for involvement by the public, we

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1 have issued a drafter technical analysis was a -- to  
2 assist in the identification of the potential hazards.

3 GTCC has, because, of course, the concentrations  
4 start out at the C boundary and then go up to anything  
5 ever produced that are in the class of low-level.

6 That can range quite several orders of  
7 magnitude of concentrations of materials, gamma,  
8 exposure rates and other things that were not  
9 considered necessarily as for normal operations at a  
10 disposal -- Part 61 disposal site.

11 So, are there challenges due to  
12 inventories? And, what are some of those inventories?

13 You know, can you just average across a subset  
14 inventory or do you need to split that up even further  
15 because of characteristics?

16 You know, what about security? Security  
17 has -- is definitely a different, again, we, in  
18 considerations after 9/11 as to what a normal Part 61  
19 facility taking up to Class C waste needs for  
20 security. Are there other considerations that need to  
21 be considered as part of the -- a site were to take  
22 greater than Class C waste or higher concentrations of  
23 waste with transuranic radionuclides?

24 Of course, this question's been out since  
25 2015. So, this does, again, provide an opportunity

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1 for you to ask questions of where we are.

2 Next?

3 So, you know, there's a lot of little  
4 things, but generally you can split the waste of  
5 greater than Class C into three basic categories of  
6 activated metals and, actually, reactor vessels are  
7 largely not, but the parts inside a reactor vessel,  
8 there can be small -- there can be components inside  
9 them which are greater than Class C waste.

10 The sealed sources, again, not all sealed  
11 sources are greater than Class C waste, but that is a  
12 type of waste.

13 And then, there's other, which have  
14 gloveboxes and other waste that -- from various things  
15 including medical isotope production.

16 Next slide?

17 So, activated metals, as a component, is  
18 the smallest volume, or no, is one of the smaller  
19 volumes, but it has the most activity.

20 Now, it's created by the neutron flux into  
21 the -- of the reactor into the component themselves  
22 and transforming the radionuclides in the steel into  
23 another radionuclide -- into a radionuclide, actually,  
24 from a stable to a radionuclide, sorry.

25 And, which that can -- is fairly well --

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1 can be fairly calculated, fairly well evaluated both  
2 by measurement and by just calculation of what the  
3 fluxes they -- of neutrons they saw.

4 But, the secondary thing is, is that most  
5 of these activated metals can have scaling on the  
6 outside from the water -- from being in the reactor  
7 inside the primary coolant or secondary coolant and  
8 have scale of surfactant contamination on it.

9 Now, this can range widely between  
10 reactors, depending on their history in the -- of was  
11 there damaged fuel? Was there other fissile -- not  
12 fissile, sorry -- fission products and some amounts of  
13 fissile that were present in the water that could have  
14 actually became onto the metal surfaces?

15 Now, one of the thing is, because of these  
16 high concentrations, we get into one of the first  
17 topics of technical considerations that aren't present  
18 normally in A, B and C waste, which is one of our  
19 concerns to look at is, is there anything to deal with  
20 heat problems? Heat production in the waste itself  
21 that could have delirious effects on disposal in a  
22 low-level waste site? Or, would it have to at least  
23 be taken into account by a disposal site?

24 And, again, because of the fact that if  
25 it's damaged fuel, you could have transuranic

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1 radionuclides as part of that scaling on the surface.

2 Next?

3 Sealed sources, okay, sealed sources are  
4 used in a wide variety of uses. Now, our bigger  
5 sources are used mostly in the medical and  
6 universities. And, they range from what in waste  
7 disposal considers short half-life of 30 years for  
8 cesium and some very large sources there, too, all  
9 sorts of other radionuclides, but including  
10 transuranic sources that have or are either americium  
11 sources, plutonium sources, that have been used in the  
12 past.

13 So, in this one, we have the -- a  
14 characteristic to make for consideration of, is there  
15 additional requirements to deal with fissile  
16 materials?

17 Would Part 61 need to be changed to  
18 evaluate or how do we put -- do we put that in the  
19 regulations? Do we put it someplace else?

20 We already have some level of evaluation,  
21 of criticality controls for disposal. But, is there  
22 more considerations because of GTCC or TRU?

23 And, again, from short lived radionuclides  
24 in this one, again, we were looking at, does the heat  
25 production actually require any changes to Part 61?

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1 Next slide, please?

2 For other waste, other waste is, of  
3 course, this nice category of all sorts of oddballs.  
4 But, the -- and a lot of this waste that was actually  
5 in the FEIS by the Department of Energy, was a lot of  
6 proposed -- was waste that could be generated, not  
7 necessarily has been generated.

8 So, some of the ones that are more near-  
9 term or realistic, are the ones on the molybdenum-99  
10 production for medical applications. And, the side  
11 wastes that get created from trying to get that  
12 molybdenum-99.

13 Or, the possible exhumation of the West  
14 Valley disposal site -- waste at the West Valley  
15 reprocessing site up in New York.

16 Next slide?

17 So, based on those, the characteristics of  
18 the types of waste we have, you know, along with just  
19 the activity concerns is that say from a dose point of  
20 view or either offsite or intruder, some of the things  
21 that really raised to evaluate whether that challenges  
22 the current Part 61 structure or is there new  
23 requirements necessary?

24 Or, you know, is there thermal output?  
25 Does the placement of these in a waste site create gas

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1 generation? Or, is there changes needed because of  
2 the possibility of more fissile material?

3 And then, also, for a couple of these  
4 sealed sources, especially, we have the potential of  
5 being more important than the parent.

6 Next slide?

7 So, the staff did some generic analyses,  
8 again, not looking at any specific site because we  
9 were looking at the, does the structure of Part 61  
10 itself have challenges?

11 And, the -- and so, is this waste  
12 appropriate for near surface disposal? Not near  
13 surface disposal on the specific site, but in general  
14 class?

15 And, we looked at the characteristics of  
16 offsite dose using a drinking water well off the site,  
17 looked at thermal output, fissile material gas  
18 generation and intruder doses.

19 And, again, having two classes, one which  
20 we have a shallow disposal site much closer to like  
21 the typical analysis that was done in Part 61 back in  
22 -- for Part 61 back in 1981.

23 And, two, one where it would not be beyond  
24 most intruders except for from a well intrusion into  
25 the facility.

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1           This was to just give us, what are the  
2 radionuclides that are driving the risks or the  
3 potential consideration do you have to do with those  
4 radionuclides in your inventory.

5           And, there's more discussed in detail in  
6 the technical paper that went with the Fed Register  
7 Notice.

8           But, in general, you see, and we picked  
9 500 and 5,000 years so that it wasn't actually an  
10 argument about length of -- for time of compliance  
11 right here. So, but, and it's also factory time.

12           So, we see a lot of both the offsite doses  
13 in both the 500 and 5,000 years being -- the  
14 plutonium-239 is a consideration as to how much  
15 isolation does that need? And, from the modeling, at  
16 least the generic modeling, is there needs to be  
17 definitely significant barriers for plutonium-239 to  
18 keep it isolated.

19           And, sealed sources, and if you have a  
20 really bad site so that you'd have releases to the  
21 groundwater within 500 years, then cesium-137 finally  
22 shows up, but it decays soon after, even with the huge  
23 -- with the very large quantities.

24           And then, intruder dose, you see the  
25 aspects, again, Part 61 GTCC level was calculated from

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1 a shallow intruder dose assessment originally in 1981.

2 And so, you see a lot of the active metals  
3 themselves of people being able to pull up the metal  
4 and be exposed to these components. The nickel and  
5 stuff are not moving out through the environment.

6 Whereas, when you go to a deep well, now,  
7 the activated metal and seal with its -- with -- while  
8 it has concentrations, you're only going to pull up so  
9 small of a piece with the well that it's not as much  
10 of a challenge for doing intruder dose.

11 But, the sealed sources, if you were to  
12 hit near one, the very concentrated americium and  
13 plutonium can really challenge that. So, again, these  
14 are forced order calculations, not taking into every  
15 intruder dose, intruder assessment that a site might  
16 be able to do or take into account the operational  
17 aspects which would maybe minimize the concentrations,  
18 the aerial concentration of materials.

19 Next slide?

20 So, we have three questions in the federal  
21 register notice which you can talk to today, talk to  
22 in writing.

23 What are the important radionuclides that  
24 need to be considered for disposal with GTCC and  
25 transuranic waste?

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1           And, this is -- sounds simple, in fact,  
2 well, maybe sort of them all, but we're also thinking  
3 like, is there more -- is there other data sources and  
4 other ways to look at it? Like, again, for like  
5 activated metals, do you look at activated metals that  
6 are from sites that have just little damaged fuel as a  
7 different category than damaged fuel sites?

8           Do you -- how do you split up the sealed  
9 sources or if there were considerations that you have  
10 to look at that?

11           So, it's not just what are important  
12 radionuclides, but also are there ways to separate out  
13 and split out the different sources into  
14 subcategories?

15           Then, second question is, how might GTCC  
16 and transuranic waste affect the safety and security  
17 of a disposal facility during operations?

18           Again, this is a lot of this is higher  
19 activity stuff than what was previously analyzed for  
20 A, B and C. And, how might GTCC and transuranic waste  
21 affect the disposal facility design for post-closure  
22 safety, including protection of an intruder?

23           So, that's the dose side of the house  
24 versus the safety and security in number two.

25           Next slide?

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1           So, we have a website with all of these  
2 information on the current status of things on  
3 transuranic waste and GTCC. Again, as I've already  
4 been mentioning, that we did release a Federal  
5 Register Notice on these -- with these questions and  
6 this analysis on February 14th.

7           Next slide?

8           Now, the Federal Register Notice does go  
9 into the various ways to provide comments which we  
10 have the way through the -- through the federal  
11 rulemaking website at regulations.gov.

12           You have the ability to email comments to  
13 rulemaking.comments@nrc.gov.

14           Fax comments and snail mail and hand  
15 deliver comments.

16           So, all sorts of ways to provide comments.

17           Again, also, this meeting is also being transcribed,  
18 although we still suggest, even if you make a comment  
19 here, to use one of these methods so that you can  
20 expand on it and make sure that your comment has its  
21 context and we get the full meaning of your comment.

22           The comment period ends on April 16th,  
23 2018.

24           Next slide?

25           And then, we have on the site how to get

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1 the regulations for more information, again, on our  
2 website. And then, Cordelia Maupin is the Senior  
3 Project Manager within the Low-Level Waste Branch that  
4 is currently the lead on this project.

5 And, I think it's questions next, so open  
6 the floor to questions.

7 MR. BARKLEY: Okay. And, again, I will  
8 ask you to speak up and then Chris will repeat your  
9 question so the people on the phone can hear you.

10 MS. EDWARDS: Thank you. Lisa Edwards  
11 with EPRI.

12 Thank you for that presentation, Chris.  
13 On the greater than Class C waste that's resulting  
14 from activated metals, I'd be interested in knowing  
15 what you would find useful in terms of information  
16 that EPRI might be able to collect and provide to you  
17 that would help you answer some of these questions?

18 It occurs to me that we have a whole  
19 history of shipments of activated metal from a variety  
20 of plants. And, there is usually quite detailed  
21 characterization of the components that are not  
22 shipped because that's how the decision was made to  
23 determine that they were greater Class C and needed to  
24 -- couldn't be shipped.

25 In addition, we've got a number of sites

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1 that have actually decommissioned where you have more  
2 activated metal that has been disposed of. And, the  
3 characterization and manifesting of that certainly  
4 exists for how that waste was dispositioned.

5 Those plants that have decommissioned are,  
6 I'm guessing, likely to be bounding conditions because  
7 the -- what I would say the integrity of fuel has  
8 certainly improved in the last several decades and the  
9 sites that have decommissioned actually operated at a  
10 time where you're like to see more fuel leakers and I  
11 presume these radionuclides of interest to you really  
12 are based upon surface contamination.

13 Because, the activation of the metal is  
14 going to be the same, right?

15 So, if there is something we can provide,  
16 then I would be interested in learning that from the  
17 staff.

18 MR. MCKENNEY: Okay. Now I have to  
19 remember all that.

20 (LAUGHTER)

21 MR. MCKENNEY: Lisa Edwards of EPRI  
22 commented about the viability or what specific  
23 information on activated metals in the creation of  
24 that because of the extensive database of both from  
25 activated metals that have been shipped along with

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1 analyses at the plants to decide that the materials  
2 could not be shipped.

3 That there may be a lot of material that  
4 EPRI could mine to try to evaluate what are those  
5 issues with the activated -- with the contamination of  
6 the -- surface contamination on the activated metals.

7 And, yes, and for the answer, the -- some  
8 of the data we've looked on some of those older  
9 reports that have gone through that. And, they have  
10 about seven plants or something like that, I can't  
11 remember.

12 And, if you look at some of those plants  
13 histories or not, well, just the results, you get like  
14 five to six order of magnitude on some plants on the  
15 levels of activated metals, or I'm sorry, surface  
16 contamination on the plants.

17 And so, again, taking a broad average of  
18 the materials, you run into a risk of the fact that  
19 the whole surface really overestimates probably the  
20 entire volume of activated metal because, again, a lot  
21 of those that have the highest values are from the  
22 earliest campaigns.

23 And so, yes, a more modern look at it, I'm  
24 saying, is there some classes or breakdowns. Again,  
25 yes, we're going to probably try to do a little bit of

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1 that ourselves. And, if you are at waste -- but we  
2 only have seven sites right now.

3 Yesterday, Tim McCartin had a presentation  
4 on waste management where he actually showed some  
5 sites. So, we can get point to those data values of -  
6 - we looked at Reactor Number 4 which was his non-  
7 named site which had almost no contamination. And  
8 then, the presence of what the average was which was  
9 several orders of magnitude higher.

10 But, I think the most modern plants would  
11 be much more closer to Reactor Number 4 than the early  
12 sites.

13 Now, on the other side, of course, as  
14 plants have gotten better, they produce less and less  
15 greater than Class C waste because they've replaced  
16 what could be irradiated.

17 But, that would be a definitely an  
18 interesting breakdown.

19 MR. SUBER: Okay, can you -- so that's  
20 just up there. Okay, yes, thanks for that -- for the  
21 question, Lisa.

22 The first thing I'd like to do is remind  
23 everyone that we do have a draft technical evaluation  
24 that's available on the website under greater than  
25 Class C where we talk about the information that we're

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1 using in the beginning of our technical evaluation.

2 And, outside of that, any information that  
3 you have that is publically available, you can submit  
4 to us through your public comments.

5 So, if you could evaluate that technical  
6 report and any -- and, I know that sometimes, EPRI  
7 reports are not publically available. And so, it  
8 would be hard for us to use them because we would have  
9 to reference them.

10 But, if you can submit any information or  
11 any technical reports to us through the public comment  
12 process that we can docket, then we can, in turn, use  
13 that information in our evaluation.

14 So, does that --

15 MS. EDWARDS: I know we have that  
16 information. I would have to create it, you know, go  
17 and mine the data myself. So, that's why I was asking  
18 if you --

19 MR. SUBER: Okay, we definitely need it,  
20 right, because the --

21 MS. EDWARDS: Like we have it by --

22 MR. SUBER: Well, we -- submit it as  
23 practicable. Okay? And, we'll evaluate it as  
24 practicable.

25 So, the basis of a lot of the information

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1 that we use was information that we received that we  
2 had and also, of course, leveraging the Department of  
3 Energy's EIS. So, there's a lot of information in  
4 DOE's EIS that we used.

5 There's information that we had that we  
6 used. But, really, the main reason we did the draft  
7 technical evaluation and submitted it for public  
8 comment is to ensure that we were capturing the  
9 universe of things that were out there.

10 So, it was our hope that people would read  
11 the draft technical evaluation and, if there were any  
12 gaps or any holes or any missing information that we  
13 had that we were considering in our analysis that you  
14 would submit that.

15 So, anything that you could submit to us  
16 on the docket would be helpful. All right?

17 Thank you.

18 MR. KIRK: Yes, Scott Kirk, Savannah River  
19 Remediation.

20 First of all, Chris, very good  
21 presentation.

22 As far as the regulatory basis go, I think  
23 you said, you know, you're looking at input from both  
24 safety and for safeguard security issues.

25 And so, what I would suggest -- what I

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1 would encourage you to do is to look at a lot of the  
2 design and site characteristics of existing disposal  
3 facilities, because they might be different. Some are  
4 in humid environments versus air sites perform  
5 different. So, that might be very helpful to you.

6 Also, I would say, look at the experience  
7 that has been gained by licensees by implementing the  
8 requirements for Part 37 for radioactive materials  
9 quantities of concern.

10 A lot of really good information and  
11 efforts have already been in place to ensure the  
12 security of those types of materials.

13 So, I would encourage you to look at the  
14 results of, you know, how that program has been  
15 implemented by the Agreement States.

16 And, I would say the same thing about the  
17 operational experience by licensees that have managed  
18 special nuclear materials in accordance with Part 150.

19 You know, under Part 50, licensees cannot  
20 exceed a critical mass of special nuclear materials,  
21 and it defines what those are. But, some licensees  
22 also have concentration based SNM limits.

23 You had mentioned looking at the framework  
24 for ensuring for nuclear criticality safety. But,  
25 under 61.16, that framework has already been somewhat

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1 looked at. And, once those materials, special nuclear  
2 materials are disposed of, that they don't count  
3 against your Part 73 physical security requirements of  
4 Part 70.

5 And, I think a lot of these issues were  
6 also looked at before about 1999, and that was the  
7 Agreement States ability to evaluate nuclear  
8 criticality safety evaluations for SNM disposed in  
9 trenches.

10 And also, a lot of these SNM concentration  
11 base limits have already been established that ensure  
12 they would be subcritical for FNRAs and media.

13 So, those are my comments.

14 MR. MCKENNEY: So, for those on the line -  
15 -

16 Thanks, Scott, for those comments.

17 Scott Kirk went through and explained a  
18 number of past evaluations on both security and on  
19 criticality that should be looked at by the staff to  
20 make sure that what were their scopes, what were their  
21 evaluations to see whether those already encompass the  
22 new potential waste of greater than Class C waste or  
23 transuranic waste.

24 And that, including Part 37 and some other  
25 analyses for -- that we've done including -- also

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1 including some of our orders that we've done.

2 But, yes, thank you, Scott, for that  
3 comment.

4 The -- we have been looking at several of  
5 those, but -- and, especially Part 37 to evaluate  
6 that. And, as you said, the criticalities are already  
7 there, but again, looking at the establishment of that  
8 regulation, is there anything more than we need than  
9 that. You know, it's quite potential that we'd say,  
10 no, that's quite adequate and we don't need to make  
11 them change that in Part 61.

12 But, given that we have a new waste, we  
13 just need to be due diligence to look at all those  
14 factors and see, is the current regulation --  
15 regulatory scope between Part 61 and Part 37 and other  
16 things robust enough or is there anything specific we  
17 need to do.

18 Any other questions?

19 PARTICIPANT: Larry has a question, he's  
20 going to come up front and then I'll take yours.

21 MR. CAMPER: Larry Camper, Advoco  
22 Professional Services.

23 Thanks, Chris, for the presentation.

24 The questions that you've asked are  
25 general questions and I know you have to proceed in a

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1 linear fashion.

2 But, I do recall in SECY-15-0094 Enclosure  
3 2 in which the staff did a rather in depth analysis of  
4 GTCC waste, the Executive Summary surfaced several  
5 specific questions. And, I'm curious as to when, if  
6 and how you might surface those questions in a manner  
7 similar to what you've done for the three broad  
8 questions?

9 Because, the work that was done by the  
10 staff in that enclosure was pretty substantive work.  
11 And, those questions would be worthy or exploring in  
12 the public arena.

13 And then, the second point I'd like to  
14 make, if I can, on your general question number three,  
15 it's very good that you're asking that question  
16 because I've heard comments about adjusting the  
17 definition in Part 61 to include transuranic waste.

18 And, it's not as simple as pure  
19 administrative change, there's some complicated  
20 technical questions and perhaps security questions  
21 that will have to be explored.

22 So, I commend you for asking that  
23 question.

24 Thank you.

25 MR. MCKENNEY: Thank you, Larry.

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1           The -- on the question of the previous  
2           SECY's questions, I think those would be evaluated  
3           when we're setting up the questions for the actual  
4           regulatory analysis when it comes out in draft to  
5           evaluate that in a more -- with the -- with all of the  
6           regulatory analysis to provide context and for the  
7           public interactions at that time.

8           As, whereas, this one is much more narrow  
9           on, are we going down the right road for the technical  
10          analyses that will then inform that draft regulatory  
11          analyses?

12                        Next?

13                        MR. SEITZ: Hi, Chris, this is Roger Seitz  
14                        from Savannah River National Laboratory.

15                        And, I have two questions, I'll break them  
16                        up for you.

17                        The first one, security is an interesting  
18                        one that I haven't thought about as much. But, what  
19                        are the thoughts in terms of are there unique security  
20                        requirements for a disposal facility that wouldn't  
21                        apply to storage facilities?

22                        And, is there some consideration that  
23                        perhaps disposing may do a big benefit in terms of  
24                        security.

25                        MR. MCKENNEY: Thank you, Roger.

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1           The comment was from Roger Seitz and was  
2 about whether -- what's the difference between, in a  
3 way, between the security needs of security -- of  
4 storage versus disposing the waste?

5           My answer is that, you have -- it's not  
6 necessarily that there is any increased risk at a  
7 disposal site. It's that, and this is, again, part of  
8 this thing of we're looking at GTCC and TRU where our  
9 previous security evaluations for what is appropriate  
10 for the range of security at a low-level waste  
11 disposal site were done without the concept of  
12 bringing GTCC and transuranic on to the site.

13           And so, again, looking at Part 37 and  
14 other requirements and saying, are those satisfactory  
15 if the disposal site were to take those into account?

16           And, you know, it's not necessarily that  
17 we're saying that they're higher -- that it inherently  
18 is a higher risk, it's just, the level of evaluation  
19 previously didn't include those.

20           So, your second question?

21           MR. SEITZ: And, the second question is a  
22 little more detailed on the intruder.

23           It seems that, for Part 61, you have  
24 different limits for activated metals versus other  
25 materials.

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1           So, greater than Class C is going to be a  
2 poster child for how are we going to do an intruder  
3 scenario for this?

4           And, I guess, has there been any thought  
5 drilling into a stainless steel component is at 500  
6 years is certainly different than drilling into some  
7 other type of Class C waste at 500 years.

8           Have you thought about how you're going to  
9 try and more realistically account for the nature of  
10 an activated metal or a sealed source?

11           MR. MCKENNEY: Yes, I mean, yes, sorry, I  
12 asked Roger for a second question.

13           The -- was about the intruder analyses and  
14 about how do you evaluate especially for the well  
15 driller?

16           The interaction between the activated  
17 metal and the drill, in other words, do -- where would  
18 you, to the degree would you actually assume it harder  
19 than other materials and stuff in the details?

20           And, well, in our cases, even if we  
21 assumed it was brought up, it was not -- it was not a  
22 risk driver for the deep disposal of activated metal.

23           The other one was that it was being  
24 brought up as part of the construction worker because  
25 it was in a shallow disposal.

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1           So, on the one slide it showed, it said,  
2           at the shallow disposal, you had external effects from  
3           the activated metal, but -- because it was being  
4           brought up in mass, not in necessarily drilling.

5           Whereas, the activated metal was not  
6           causing a concern at the deeper disposal.

7           Even at simple, and not taking into  
8           account of the material strikes.

9           Now, the same question, though, is true  
10          for sealed sources and what degree of protection --  
11          what degree of barrier protection could you take in  
12          account of the - for the barrier around the sealed  
13          source? That could still be looked at.

14          Next question?

15          MR. BARKLEY: This gentleman's going to  
16          come to the front and make a question.

17          MR. KALINOWSKI: Tom Kalinowski with D.W.  
18          James Consulting.

19          Chris, I was wondering if you could  
20          clarify a little bit the concern with the fission  
21          product radionuclides on GTCC activated metals.

22          The fission products are present in the  
23          corrosion layer which is the same corrosion layer  
24          that's on the Class A, B and C activated metals. So,  
25          if it's not a -- I mean, if the issue's been evaluated

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1 for A, B and C, why is it of greater concern for GTCC  
2 activated metal?

3 MR. MCKENNEY: Thank you for that  
4 question.

5 So, one was, and maybe it was -- it  
6 depends, when we've been looking at the evaluations  
7 that have had -- they had very large amounts of  
8 especially transuranic radionuclides on some of those  
9 data sets which we don't think that -- we think those  
10 are a result of scaling factors and really  
11 overestimations in reality.

12 But, you're right, we should go back and  
13 look at the other ones. Why is it any different?

14 MR. BARKLEY: Any other questions in the  
15 room?

16 (NO RESPONSE)

17 MR. BARKLEY: We should move to the  
18 microphone and see if there's anyone on the webinar  
19 that has a question.

20 MR. MCKENNEY: Any questions on the  
21 webinar or on the phone lines?

22 OPERATOR: No questions in queue.

23 MR. DAPAS: Can we ask, like Rich said, if  
24 you have a question, you come up to the front. We  
25 just want to get some of the comments over here.

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1 There's frustration by people on the phone because  
2 they can't hear the questions.

3 So, I apologize for the set up here, it's  
4 not the best. But, if you wouldn't mind coming up to  
5 the podium so that the people can hear the question  
6 and then hear the answer. I think it will be more  
7 productive for those that are listening in.

8 Thank you.

9 MR. BARKLEY: Yes, thank you very much.

10 MR. DEMBEK: For those of you on the  
11 phone, we just ask that everyone coming -- everyone  
12 having questions that they come up to the podium so  
13 hopefully things will be better from now on.

14 Thank you for your patience.

15 MR. BARKLEY: Okay, with this point, I  
16 believe by the agenda, we are set to take a break here  
17 before the next presentation, correct?

18 (OFF MICROPHONE COMMENTS)

19 MR. BARKLEY: So, should we come back at  
20 1:35 officially and start this?

21 (OFF MICROPHONE COMMENTS)

22 MR. BARKLEY: By this time zone, 10:32 by  
23 that computer, 1:32. Thank you.

24 (Whereupon, the above-entitled matter went  
25 off the record at 10:32 and resumed at 10:40 a.m.)

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1 MS. JAMERSON: Good morning, my name is  
2 Kellee Jamerson and I'm a Project Manager in the  
3 Division of Decommissioning Uranium Recovery and Waste  
4 Programs.

5 I will be presenting today on the very  
6 low-level waste scoping study.

7 As you can see from this, the NRC's low-  
8 level waste program continues to be very active. Our  
9 focus for this presentation, as I mentioned, is very  
10 low-level waste.

11 Waste considered under this term are on  
12 the lower end of Class A waste.

13 Next slide, please?

14 To provide some background, in 2007, due  
15 to developments in the national program for low-level  
16 radioactive waste disposal, the NRC conducted a  
17 strategic assessment of its low-level radioactive  
18 waste program.

19 There were 20 tasks identified in the  
20 assessment and three of those were related to very  
21 low-level waste. Those tasks were to coordinate with  
22 other agencies on a consistency and regulating low  
23 activity waste disposal, develop guidance that  
24 summarizes disposition options for low end materials  
25 and waste and to promulgate a rule for disposal of

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1 what is now termed very low-level waste.

2 In 2016, a programmatic assessment was  
3 conducted and one task identified as medium priority  
4 was to perform a very low-level waste scoping study.

5 This task combined the three tasks above  
6 from the 2007 strategic assessment.

7 There was an additional task on the  
8 programmatic assessment which was deemed a high  
9 priority and was to finalize the guidance for 10 CFR  
10 20.2002, Method for Obtaining Approval of Proposed  
11 Disposal Procedures.

12 As mentioned earlier, revisions to this  
13 guidance document are in process and it is expected to  
14 be finalized by the end of the year.

15 Currently, very low-level waste can be  
16 disposed under the provisions of 10 CFR 20.2002. With  
17 more decommissioning waste anticipated, the volume of  
18 very low-level waste is also expected to increase.

19 Next slide, please?

20 So, why perform a very low-level waste  
21 scoping study now?

22 Although it was originally listed as a  
23 medium priority in a programmatic assessment, the very  
24 low-level waste scoping study has increased in  
25 priority.

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1 Changes in the timing of decommissioning  
2 has elevated the importance of evaluating more risk  
3 informed and performance based approaches for the  
4 management of very low-level waste.

5 The staff also recognizes the potential  
6 opportunity to improve regulatory efficiency and  
7 effectiveness by considering other options for very  
8 low-level waste disposal that might create less of a  
9 burden -- regulatory burden on licensees.

10 And, lastly, there's an opportunity to  
11 explore closer alignment with IAEA standards and other  
12 international practices.

13 Next slide, please?

14 The purpose of the very low-level waste  
15 scoping study is to identify possible options to  
16 improve and strengthen the NRC's regulatory framework  
17 for the disposal of very low-level waste, including  
18 the potentially large volumes of very low-level waste  
19 associated with the radiological event such as a  
20 radiological dispersal device.

21 As part of the scoping study, the NRC  
22 intends to evaluate regulatory options that would  
23 define the conditions under which very low-level  
24 waste, including mixed waste, could be disposed of in  
25 regular hazardous waste facilities.

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1 Nest slide, please?

2 So, in initiating the very low-level waste  
3 scoping study, the staff has considered lessons  
4 learned and available information from a variety of  
5 sources, some of which are seen here.

6 The staff will consider the efforts of  
7 other entities and government agencies, studies  
8 conducted by the National Academy of Sciences and EPRI  
9 as well as EPA's 2003 Advanced Notice of Proposed  
10 Rulemaking.

11 Staff will also consider learnings from  
12 other countries with respect to very low-level waste  
13 disposal as a benchmark and other factors to inform  
14 the NRC staff's recommendations to the Commission for  
15 addressing very low-level waste.

16 In light of this, the staff has developed  
17 questions which you will see momentarily where we  
18 desire additional input from our stakeholders.

19 And, as Greg offered, if you have  
20 publically available information about very low-level  
21 waste management, we encourage you to please submit  
22 that to the staff with your formal comment submission.

23 Next slide, please?

24 As a point of clarity, while the very low-  
25 level waste scoping study may consider the direct and

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1 stakeholder comments and lessons learned from the  
2 below regulatory concern policy statements in the  
3 proposed rule for controlling the disposition of solid  
4 materials is a very different endeavor.

5 The scoping study will only consider  
6 disposal of waste as defined by 10 CFR Part 61 and  
7 which is essentially the isolation of radioactive  
8 waste from the biosphere inhabited by man and emplaced  
9 into a land disposal facility.

10 It will not address non-disposable related  
11 disposition pathways, including unrestricted release,  
12 clearance, reuse or recycled materials.

13 Next slide, please?

14 At the conclusion of the scoping study,  
15 results of the staff's assessment as well as our  
16 recommendations will be presented to the Commission in  
17 a SECY paper.

18 Potential results of the study will  
19 include a no action ranging from no action to a  
20 potential rulemaking promulgating a rule that would  
21 define the conditions under which very low-level waste  
22 could be disposed.

23 Staff may also consider additional  
24 guidance documents, the need for additional  
25 coordination with other federal agencies or the need

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1 for a further analysis.

2 And, I would also add, that if you have  
3 suggestions for additional possible outcomes, we  
4 welcome your feedback on those as well.

5 Next slide, please?

6 On February 14th, 2018, the staff noticed  
7 in the Federal Register our very low-level scoping  
8 study and requests for comment. And, respondents were  
9 asked to consider specific questions posed by the  
10 staff. And, these questions are following on the next  
11 slide, please.

12 So, we do not have the full questions  
13 listed here on this slide, but they have been provided  
14 in the back as a handout and also in the Federal  
15 Register Notice itself.

16 So, to paraphrase the nine questions as a  
17 high level description of each topic for the  
18 questions.

19 Question number one is associated with the  
20 regulatory definition of very low-level waste.

21 Question number two is regarding new waste  
22 category for very low-level waste.

23 Three is asking about guidance documents.

24 Number four, the NRC Agreement State  
25 compatibility issues.

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1                   Number five, regional compact authority.

2                   Next slide, please?

3                   Number six, waste analysis requirements.

4                   Number seven, unintended consequences.

5                   Number eight, analytical methods to assess  
6 risk.

7                   And, lastly, number nine, economic  
8 factors.

9                   Next slide, please?

10                  So, this provides just information about  
11 where you can find more information on the very low-  
12 level waste at the NRC's website.

13                  As I mentioned, this was issued in the  
14 Federal Register on February 14th. Our comment period  
15 will be a 90-day comment period and will end on May  
16 15th.

17                  Next slide, please?

18                  How to provide comments, so, we have this  
19 listed here as well as on the back of your agenda on  
20 how to provide comments and it's for both the very  
21 low-level waste scoping study and also for GTCC for  
22 your convenience.

23                  We do have the regulations.gov website as  
24 well as you can email your comments to very low-level  
25 waste, vllw\_scopingstudy@nrc.gov as well as mailing

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1 your comments.

2 And, as a reminder, the comment period  
3 ends on May 15th.

4 Next slide, please?

5 For additional information, see our public  
6 websites. You may contact myself, Kellee Jamerson or  
7 Maurice Heath at the information listed here. It's  
8 also provided on the back of the agenda.

9 This concludes my presentation. Are there  
10 any questions, comments?

11 MR. BARKLEY: Okay, questions in the room?

12 Hi, why don't you go up front, thank you.

13 MR. CAMPER: Larry Camper, Advoco  
14 Professional Services.

15 The slide where the outcomes are  
16 identified, rulemaking, I think we can all readily  
17 understand that, guidance documents.

18 I'm curious as to what the staff's  
19 preliminary thinking is about what the term  
20 coordination with other agencies might mean?

21 Historically, back around 2003, the EPA  
22 was pursuing a low activity waste initiative. They  
23 stopped that. They've raised that specter a few  
24 times, almost always waiting for their new  
25 administrator.

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1 So, might that mean?

2 And then, the other question is, what's  
3 the target date for conclusion of this initiative?

4 MR. BARKLEY: Thank you.

5 MS. JAMERSON: Thank you for your comment,  
6 Larry.

7 What is meant by coordination with other  
8 agencies is, we are coordinating, essentially, with  
9 the EPA on the scoping study. And, we have considered  
10 their comments and concerns. And, it has been rolled  
11 into the FRN with the questions that you see. They  
12 did provide us with feedback for that. So, we are  
13 coordinating in that instance.

14 And, the proposed date for a final, we are  
15 -- so with this ending in May, comment period ends in  
16 May, we are hoping to provide information to the  
17 Commission I would say by spring 2019.

18 MR. BARKLEY: Go ahead, Larry.

19 MR. CAMPER: Larry Camper, Advoco  
20 Professional Services.

21 I understand that you're coordinating with  
22 other agencies as you go about this. What I mean is,  
23 as an operational outcome, what might coordination  
24 with other agencies look like futuristically?  
25 Futuristically as an outcome?

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1 MR. SUBER: All right, thank you, Larry.  
2 Once again, this is Gregory Suber.

3 As you -- as Kellee mentioned in her  
4 presentation, the EPA had initially started a  
5 rulemaking. And, as we go through this endeavor,  
6 there are several outcomes, right?

7 So, the NRC can undertake a rulemaking.  
8 It may be possible that the NRC could come to some  
9 agreement with the EPA in a Memorandum of  
10 Understanding on how to deal with large quantities of  
11 very low-level waste generated from a radiological  
12 accident.

13 What we didn't want to do is put  
14 limitations on the possible outcomes. So, it could be  
15 a rulemaking, it could be guidance, it could an MOU,  
16 there could be a variety of things that could come  
17 about as a result of our coordinating with other  
18 federal agencies.

19 So, does that answer your question?

20 And, with regard to the time line, I  
21 thought it was a little closer to six months after the  
22 end of the comment period that we will probably be  
23 coming out with at least a draft scoping study to put  
24 through concurrence process. So, I would think it  
25 would probably be a little closer to the end of this

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1 calendar year for a final scoping study and  
2 recommendation to the Commission for future actions.

3 MR. BARKLEY: Any other questions in the  
4 room?

5 (NO RESPONSE)

6 MR. BARKLEY: Kellee, let's try on the  
7 bridge to see if there's anyone with a question.

8 MS. JAMERSON: Operator, are there any  
9 questions on the bridge line?

10 OPERATOR: Yes, we do have a question.  
11 Diane D'Arrigo, your line is open.

12 MS. D'ARRIGO: Thank you. Diane from  
13 NIRS.

14 I saw in the Federal Register of this for  
15 the very low-level scoping that you're saying that the  
16 large increase in volume from decommissioning and  
17 possibly from reprocessing and from a dirty bomb.

18 I wanted to know, with regard to the  
19 second one, with reprocessing, what the thinking is?  
20 Is that -- I mean, since we don't have reprocessing  
21 right now. And also, what part of the reprocessing  
22 waste stream is that low?

23 MR. SUBER: Once again, this is Gregory  
24 Suber. Thanks, Ms. D'Arrigo.

25 The question was, in the Federal Register

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1 Notice, we put I believe three things down there for  
2 conducting the low-level waste scoping study and  
3 bringing it up in importance.

4 One was the anticipation of reactor  
5 decommissioning which has been accelerated through  
6 premature closing of plants.

7 The second was a possible new waste  
8 streams including reprocessing.

9 And, the third was response to a  
10 radiological event or accident.

11 And, Diane, what we were trying to convey  
12 in that particular instance, and we were just using  
13 reprocessing as an example, but what we were trying to  
14 do is look at the universe of things that are going on  
15 within the nuclear field and saying that there are  
16 other activities that people are suggesting,  
17 molybdenum production, that there are a number of new  
18 activities that are potentially on the horizon that  
19 will generate an array of waste.

20 And, recognizing these new technologies,  
21 we just wanted to be in a position to safely and  
22 efficiently dispose of concentrations of Class A waste  
23 that are very low.

24 Does that make it clearer?

25 MS. D'ARRIGO: With -- well, with regard

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1 to reprocessing, if there were to be new rules made  
2 and new reprocessing facilities started up, are you  
3 envisioning very low-level waste coming from  
4 reprocessing?

5 Is that -- I totally understood what you  
6 were saying and I was trying to understand, when  
7 that's one of the hottest processes in the whole fuel  
8 chain, why that would be an example of generating very  
9 low-level waste.

10 So, what portion of the reprocessing waste  
11 would you be thinking about with regard to very low-  
12 level waste?

13 MR. SUBER: Okay, so the question is what  
14 -- with reprocessing being an activity that uses  
15 radioactive material of very high concentrations, what  
16 portions of the waste would we be considering for very  
17 low-level waste?

18 And, what I'd like to emphasize, again,  
19 is, once again, when you talk about new technologies,  
20 and we -- and Chris alluded to this earlier in his  
21 comments, historically, we have looked at waste and  
22 classified waste but not by its hazard, but by the way  
23 it was generated.

24 I mean, high-level waste is basically, you  
25 know, waste that is high-level waste is, by definition

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1 and not exactly by its radiological content and  
2 hazard.

3 And, what we were saying or what we were  
4 asking, because, as you know, this is a scoping study,  
5 the question that we were asking is that, as we look  
6 at these new processes, including reprocessing and we  
7 just used that as an example, and I'd like to re-  
8 emphasize that, as we look at new processes, you know,  
9 should we look at them holistically and look at the  
10 risk generated by the waste streams and just not  
11 designate waste as hazard, you know, not classify it  
12 based on its origin, but classify the waste based on  
13 its hazard.

14 So, that's the question that we're asking  
15 in that part of the scoping study. Is that clear?

16 MR. D'ARRIGO: Well, I hear what you're  
17 saying. It's just that it seems like a very strange  
18 example to give. I mean, it's an indicator that, yes,  
19 you are seriously looking at licensing reprocessing.

20 But, if those of us around reprocessing  
21 facilities are struggling trying to clean them up and  
22 it seems like it's an insurmountable problem to talk  
23 about, classifying some of that waste as very low-  
24 level, it seems like the worst example you could come  
25 up with.

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1                   And, I just wondered if there's some part  
2 of the reprocessing process that generates a lot of --  
3 and I understand with decommissioning that you want to  
4 have concrete and soil, of course, your pond's  
5 releasing it, but I can see where it's coming from.

6                   But, with reprocessing, I don't know if  
7 you're talking about the hardware around -- I mean,  
8 everything's high-level to do with it. And so, I'm  
9 just -- where in that process would there be any very  
10 low-level waste?

11                   MR. SUBER: Okay, so I recognize your  
12 point. And, maybe reprocessing wasn't the best  
13 example.

14                   But, what we are saying is that we are  
15 going to look at those wastes based on the hazard.  
16 And, that was the point that we were trying to  
17 communicate in that particular example.

18                   And, should we have picked a better  
19 example, standing up here today right now, I would say  
20 yes.

21                   MS. D'ARRIGO: Okay.

22                   MR. SUBER: Thank you.

23                   MR. BARKLEY: Thank you.

24                   Let's check with Cedric to see if there's  
25 any other people that have a comment that's on the

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1 line.

2 MS. JAMERSON: Cedric, do we have any  
3 additional questions?

4 MR. KLEVORICK: Phil Klevorick.

5 MS. JAMERSON: I'm sorry?

6 MR. KLEVORICK: Can you guys here me?  
7 It's Phil Klevorick in Clarke County, Las Vegas,  
8 Nevada.

9 MS. JAMERSON: Okay.

10 MR. KLEVORICK: I gave my name to the  
11 operator, I'm not sure if I was going to get  
12 introduced.

13 MS. JAMERSON: Yes, you're through.

14 MR. KLEVORICK: Okay. So, good morning.  
15 I'm obviously calling from Las Vegas. So, mine is an  
16 administrative question, not a technical question.  
17 So, I would appreciate some kind of explanation on how  
18 a Federal Register Notice on February 14th can  
19 subsequently include a proactive, positive public  
20 meeting that would be held on February the 22nd?

21 And, I guess what I'm trying to get at is,  
22 is there a minimum amount of notification that needs  
23 to go in the Federal Register Notice for public  
24 involvement?

25 And, the second part of that question is,

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1 does the NRC understand that if they did meet a  
2 minimum requirement for a Federal Register Notice, do  
3 they understand that it's very difficult for people  
4 who are not living in the D.C. area to make  
5 arrangements to participate in person at these  
6 meetings on such a short notice?

7 MR. DEMBEK: Hello, my name is Steve  
8 Dembek, I'm going try to answer your question or  
9 comment.

10 Basically, the NRC's official process for  
11 noticing our public meetings to through the NRC  
12 website. And, the goal there is to announce these  
13 meetings ten days ahead of time. But, that is a goal,  
14 that's not a requirement on the NRC staff, that's a  
15 goal.

16 And, in that case, that was done for this  
17 particular meeting.

18 The Federal Register Notice was an extra  
19 notification of this meeting and it also contained the  
20 additional information about the questions we would  
21 like to be answered by the public.

22 So, the Federal Register Notice,  
23 basically, was a reinforcement of a meeting  
24 announcement that was already made publically  
25 available through the NRC's website. And, that's the

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1 NRC's policy, that's not the policy of the people in  
2 this room here, that's an official NRC policy that the  
3 website is to be used as our official notification  
4 process for public meetings.

5 MR. KLEVORICK: So, to follow up on that  
6 question, so the NRC is satisfactory with an eight-day  
7 or, as you would refer to a ten-day notice via a  
8 website for a public involvement?

9 So, I guess, and then, I'm going to pause  
10 for a second, because I'm going to say that your  
11 answer is going to be yes.

12 So, if your answer is yes, why is it that  
13 you have such a short period of time for the  
14 notification for -- that would exclude public  
15 involvement?

16 Why is it important to meet minimum  
17 requirements for the NRC to exclude public involvement  
18 or participation?

19 MR. DEMBEK: Well, we always try to  
20 maximize public involvement and participation. And,  
21 in that meeting and in the meeting you're talking to  
22 me, we had set up a webinar and we have set up a  
23 bridge line for those people who cannot, on short  
24 notice, make it to the meeting physically.

25 So, we try to have different ways, and we

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1 also transcribe the meeting. So, if you're not able  
2 to come to the meeting or you're not able to listen in  
3 at that particular time, you are able to read through  
4 the transcript and see what others have said.

5 And, also, there is plenty of time for you  
6 to submit public comments on this issue based on the  
7 Federal Register Notice questions that we would like  
8 to be answered. So --

9 MR. KLEVORICK: Well, I appreciate your  
10 comment, but you're not answering my question. My  
11 question is very simple. Why is it that it was such a  
12 short time notice that was so important to meet a  
13 short public notice advisory of eight days from the  
14 Register Notice or ten days from your website, as you  
15 indicated, which, by the way, I've already indicated  
16 how difficult it is to find that notice, so why isn't  
17 it that important?

18 Why would not have done it, say, 30 days  
19 in advance or three weeks' notice or whatever the case  
20 may be?

21 So, I'm asking why such a short time  
22 period notice?

23 MR. DAPAS: Yes, this is Marc Dapas, the  
24 Director of the Office of Nuclear Material Safety and  
25 Safeguards.

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1           And, first of all, I want to thank you for  
2 your comment here. And, I have received comments from  
3 other members of the public. We need to do a better  
4 job in ensuring that we provide sufficient advance  
5 notification of when we are planning to have a public  
6 meeting so we can maximize the opportunity for  
7 individuals to participate in that public meeting in  
8 person, if they so desire.

9           I would agree with you that eight days is  
10 not sufficient notice. And, while we do post a public  
11 meeting notice of availability or plans to conduct  
12 that meeting on the NRC's public website under Public  
13 Meeting icon or section, you know, I'm not convinced  
14 that two weeks is the best time frame.

15           We can do better in that regard and I want  
16 to apologize that you only had eight days advance  
17 notification of this meeting. And, planning to  
18 participate in person with the travel distance can be  
19 difficult.

20           So, we do need to do a better job there.  
21 I do appreciate your engagement over the phone so that  
22 you could take part. And, I am sorry that you weren't  
23 able to attend in person because there wasn't  
24 sufficient advanced notification.

25           So, we need to do better in that regard.

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1 MR. KLEVORICK: Well, and I appreciate  
2 your comment, Marc. I understand that you do  
3 recognize that and a similar situation would have been  
4 for today's meeting.

5 I was in waste management all for the last  
6 four days. But, because of the short notice on that  
7 stuff, it actually would have cost me more to have  
8 changed it than it cost me to fly back and forth.

9 So, I obviously would prefer to be in  
10 person for something that obviously Clarke County is  
11 interested in being involved in. So, anything you can  
12 do help increase the time line for participation, and,  
13 yes, I understand that we all have the ability to  
14 generally be involved in a webinar which is, I don't  
15 believe is anywhere in my top three of preferences,  
16 how to attend the meeting.

17 But, I do understand that that is an  
18 option, not the preferred option and for most people,  
19 it becomes a second or a third option for -- if the  
20 first of attending in person doesn't work out. And, I  
21 appreciate you understanding that.

22 So, knowing that, I'm sure that the NRC's  
23 approval process takes a significant amount of time to  
24 get through when they have to -- or when you guys have  
25 to do your travels. So, understanding that other

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1 government agencies operate probably within the same  
2 general purview and requirements. So, understanding  
3 that as well.

4 And, again, I'm not here to advocate one  
5 way or another, I'd just appreciate the fact that I  
6 don't believe that the public should be excluded from  
7 being able to participate in person because of the  
8 short notice or time frame.

9 So, going back to my original question,  
10 Marc, I guess, is there a reason why the NRC chose to  
11 have such a short time line on having the public  
12 meeting on the 22nd?

13 MR. DAPAS: We wanted to have the public  
14 meeting here in conjunction with the waste management  
15 symposium in order to maximize the opportunity for any  
16 stakeholders that we felt had a significant interest  
17 in the subject matter to attend.

18 And, we should have noticed it sooner. I  
19 would offer the reason that we didn't is following  
20 what is the standard practice in terms of time,  
21 advanced notice there.

22 And, my point is, we need to do better.  
23 And, I'm most disappointed to learn that you here and  
24 did not have the opportunity to participate in person  
25 because there wasn't sufficient advanced notice.

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1           So, again, we do need to do a better job.

2           It is my hope that future meetings, clearly, where  
3           you would have a desire to attend and be involved in  
4           person, that we are giving you sufficient advance  
5           notice so that you can make plans accordingly.

6           And, I truly -- I do truly apologize for  
7           the circumstance here and how it played out.

8           MR. KLEVORICK: Okay, thank you.

9           MS. JAMERSON: Do we have any additional  
10          questions from the phone?

11          OPERATOR: No further questions.

12          MR. BARKLEY: Any further questions from  
13          the audience?

14          (NO RESPONSE)

15          MR. BARKLEY: Okay, I think we're done at  
16          this point, Kellee.

17          All right, thank you.

18          I do want to thank you for your  
19          participation today and for your cooperation as we  
20          worked around some of the phone issues here.

21          We did have 16 participants on the phone  
22          line the whole time, so it got to the point where it  
23          was about 40 percent of the audience. So, I  
24          appreciate you accommodating them.

25          To wrap up, I'll have Marc Dapas come up

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1 here and then, at that point, we'll be finishing up  
2 the meeting significantly earlier than we were  
3 originally planning. But, thank you. I think we got  
4 to everyone's questions, so I appreciate. It.

5 MR. DAPAS: Yes, thanks.

6 I just wanted to take the opportunity to  
7 thank you for joining us here on a Friday morning here  
8 after, for many of you, a long week with the waste  
9 management symposia.

10 We very much appreciate the input. I  
11 mentioned that one of our principles of good  
12 regulation is being open and transparent and affording  
13 the public an opportunity to participate in a  
14 meaningful manner in the NRC's decision making  
15 process.

16 You know, we are gathering information.  
17 We need your input so that we can make the most fully  
18 informed decisions on how we want to proceed.

19 You heard reference to the very low-level  
20 waste scoping study and the result of that and how we  
21 would forward any proposed recommended changes in  
22 approach to the Commission for their policy  
23 consideration.

24 Greater than Class C waste, there are a  
25 lot of issues and facets associated with that. It's a

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1 challenging issue. We want to develop a regulatory  
2 basis that is as informed as it can be so we welcome  
3 your input.

4 Don't let this public meeting be the only  
5 forum in which you take advantage of the opportunities  
6 to provide us input so we can fully consider that.

7 You know, and if you have thoughts going  
8 forward, please share those with us. And, there are  
9 many ways that you can do that. And, of course, you  
10 know, there will be a public comment period as part of  
11 these products that we talked about.

12 So, again, thank you for your time and  
13 attention. And, some of us -- we will be here for  
14 whatever time necessary after the close of this  
15 meeting if you wanted to have any continuing dialogue  
16 in any of the matters that we discussed today.

17 So, I wish all of you safe travels going  
18 back to your destination and thanks and enjoy the rest  
19 of the day.

20 (APPLAUSE)

21 (Whereupon, the above-entitled matter went  
22 off the record at 11:10 a.m.)

23

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