

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION

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Programs for Spent Fuel Storage and
Transportation Under 10 CFR Parts 71 and 72
Stakeholders Meeting

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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

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4 PUBLIC MEETING TO OBTAIN STAKEHOLDER FEEDBACK ON
5 ENHANCEMENTS TO THE LICENSING AND INSPECTION
6 PROGRAMS FOR SPENT FUEL STORAGE AND TRANSPORTATION

7 UNDER 10 CFR PARTS 71 AND 72

8 + + + + +

9 THURSDAY

10 AUGUST 16, 2012

11 + + + + +

12 ROCKVILLE, MARYLAND

13 + + + + +

14 The Public Meeting convened at the Nuclear
15 Regulatory Commission, Two White Flint North, Room T2B3,
16 11545 Rockville Pike, at 8:30 a.m., Bret Leslie,
17 Facilitator, presiding.

18 PRESENT:

19 BRET LESLIE, Facilitator

20 MARK LOMBARD, Director, Division of Spent Fuel
21 Storage and Transportation (SFST),
22 Office of Nuclear Material Safety and
23 Safeguards

24 MICHAEL D. WATERS, Branch Chief, SFST

25 KRISTINA L. BANOVA, Project Manager, SFST

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BERNARD WHITE, Senior Project Manager, SFST

PRESENT: (CONT.)

JENNIFER DAVIS, Senior Project Manager, SFST

JOHN GOSHEN, Project Manager, SFST

DANIEL HUANG, Senior Project Manager, SFST

ERIC BENNER, Branch Chief, SFST

NEIL DAY, Structural Engineer, SFST

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1 Adjourn

2
3 P R O C E E D I N G S

4 8:32 a.m.

5 FACILITATOR LESLIE: Welcome and good
6 morning. My name is Bret Leslie, and I think we're going
7 to go ahead and get started on this meeting to obtain
8 NRC - well, to obtain stakeholder feedback on
9 enhancements to the licensing and inspection programs
10 for spent fuel storage and transportation.

11 And before we get into the meat of the
12 meeting, I've got to go through a few things, including
13 things like the agenda, making sure people have the
14 information that will most effectively allow them to
15 participate.

16 So, again, my name is Bret Leslie. And to
17 keep people aware of certain things, we haven't told
18 people that they can't sit at the front table, but be
19 aware every page you turn gets picked up on these mics.

20 So, on the other hand, you can also sit at
21 the tables that have these mics, and why are these mics
22 important?

23 Well, first we have Toby Walter over here
24 and we're transcribing the meeting. And so, one of the
25 golden rules is if you're going to speak, you're going

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1 to have to speak into a mic, and you're going to have
2 to identify yourself.

3 But if you're shy, which I don't think this
4 crowd is, I have comment cards that you can fill out
5 and catch my name and I'll be happy to read your question
6 and comment into the record.

7 So, just if you feel like you need to
8 comment, but don't want to step to either the mic, I'll
9 have a hand-held mic that we can walk around or you can
10 step up to the table. So, that takes care of that.

11 Also, we have remote participants. We have
12 an operator-assisted bridge line. So, this meeting is
13 a Category 3 meeting in which we're trying to maximize
14 stakeholder input. And I'll describe a little bit more
15 about what the staff did ahead of time before this
16 meeting, but we'll be looking for input from the people
17 here in Rockville, but also our remote participants.

18 And they can work through the operator.
19 Julie is the operator, and I'll be turning to her several
20 times today.

21 We also have this meeting which will be
22 projecting the slides on the GoToMeeting. And I've got
23 Neil over here who I'll be turning to also in those
24 comment periods.

25 So, the general framework for this meeting

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1 today is this is not the first meeting on this topic.

2 Last year about this time staff came out and kind of
3 did an introduction to that.

4 And Mike will get into some of the details
5 about that a little bit later today, but today they're
6 focused really on four topics. And tomorrow they'll
7 have one additional topic.

8 So, let me walk through the agenda right
9 now. I should only take another five minutes to finish
10 going through the ground rules and facility information,
11 talk about security.

12 Security is an issue and it plays into this
13 agenda. Before I get any farther, let's talk about the
14 ground rules. I'm just asking people here to follow
15 a couple of simple ones.

16 Again, they're a reflection of the interest
17 I perceive from the community involved today, but I'd
18 ask everyone to agree to respect the meeting, the process
19 and their colleagues. So, that reminds me that all
20 mobile devices need to be silenced.

21 Respect includes trying not to do any
22 sidebar conversations and ensuring if you would like
23 to be heard, you'd like to have your neighbors heard
24 as well. The one-at-a-time is to ensure that we have
25 a clean transcript, help Toby out here.

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1 And I think we'll have plenty of time, we
2 have multiple opportunities, but I'd like to start off
3 with just an initial time limit per commenter of three
4 minutes.

5 We'll see how that works depending upon the
6 topic. I want to make sure I can get to everyone both
7 here in the audience and those that have dialed in
8 remotely.

9 So, if I can get a shaking of the heads one
10 way or the other whether you guys can agree to these
11 ground rules, then I can move on.

12 Sounds good? Okay. Thank you. And I
13 don't think I'll ever have to go back to them again given
14 this audience, but we'll have agenda - going back to
15 the agenda, we'll have some introductory remarks from
16 Mark Lombard. That should take us up to about nine
17 o'clock.

18 Then to kind of provide the framework and
19 context for the meeting, Mike Waters will provide an
20 overview of licensing and inspection program
21 improvement review. That should take us to about 9:15.

22 At that point, we have scheduled a 15-minute
23 break. We will keep the bridge line open. So, for those
24 of you who are listening remotely, you might hear a lot
25 of scattered sound while we're in that break.

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1 We'll return from our break at 9:45 and
2 Bernie White will come up front. We'll have some people
3 moving in and out up here through the day depending upon
4 the topic.

5 Let me tell you about the compatibility of
6 requirements for storage, transportation and spent
7 nuclear fuel with the subtext retrievability, cladding
8 integrity and safe handling.

9 So, not only do we have the slides that we're
10 projecting, I wanted to let everyone know that when they
11 came in, there's a packet of information that you should
12 have picked up that looks something like this.

13 In addition, there is an NRC Public Meeting
14 Feedback form which we encourage you to fill out. We're
15 always looking for ways to improve. We like compliments
16 as much as complaints. So, don't hesitate to fill that
17 out.

18 In the packet are not only the slides, but
19 the regulatory issue summaries. And I think one of the
20 things that the staff did really well to try to maximize
21 stakeholder input, was to frame the topics that they
22 want to talk about today.

23 And so, for those who are joining us
24 remotely if you don't have the regulatory issue
25 summaries, they are very easy to find on the NRC webpage.

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1 All you have to do is go to www.nrc.gov, scroll over
2 to public meetings and involvement, and you'll see on
3 the left-hand side conferences and symposium. And that
4 will take you directly to the page that has all the
5 information, including the regulatory issue summaries.

6 So, in terms of Bernie will tee up that first
7 topic where staff are looking for feedback. And after
8 that, there will be about an hour and a half for feedback
9 from the stakeholders.

10 And when we get to that point, I'll kind
11 of refresh people, but remember the folks today here
12 at NRC are primarily in the listening mode. The
13 speaking mode is to try to set up and provide the context
14 for helpful comments to us.

15 So, we're really looking to the audience
16 today to help the staff do their job to kind of make
17 sure - they're going to lay out some considerations in
18 their talks and the regulatory issue summary, but the
19 staff in starting any project, wants to make sure that
20 the scope is right.

21 And so, part of the purpose of this meeting
22 is to ensure that if there's something that the staff
23 hasn't thought of, that's what they want to hear about.

24 And also if they've thought about
25 something, have they thought about all the aspects of

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1 that something? And I'll walk through that when we get
2 into the meeting itself and the stakeholder feedback
3 periods.

4 We'll be breaking around 11:30 and going
5 to an hour and 15 minutes for lunch. Okay, now here's
6 the issue. You already know how long it takes to get
7 through security. We're going to ask you to eat here
8 inside the building.

9 We're not requiring you to do that, but
10 realize that if you want to go outside, that means you're
11 going to have to be escorted back over to the other
12 building, get rid of your badge, have a short lunch,
13 come back in and rush in and try to get the meeting
14 started on time, because I will start the meeting on
15 time right at 12:45.

16 You have a couple dining options
17 downstairs. The main cafeteria, and there's another
18 New Reg Café off over in the other building.

19 Because this is a secure facility, you can
20 go to the bathrooms right out here and to the back, but
21 you will be enable to go into any of the other floors
22 unescorted.

23 So, please if you need to step outside for
24 some reason, please see someone from the NRC staff and
25 ensure that you're escorted. And I think the NRC staff

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1 can escort up to five people at a time.

2 So, lunch time, look for your favorite NRC
3 staff or someone you want to meet, and they'll be happy
4 to help you.

5 Coming back then at 12:45, Jennifer Davis
6 will start us off in the afternoon talking about
7 regulating standalone independent spent fuel storage
8 installations. And just like in the morning, that will
9 be followed up by a public comment period with - oh,
10 I forgot we actually - one of the things the staff did,
11 and again this is indicative of a Category 3-type
12 meeting, is when Kris Banovac here put out the initial
13 meeting announcement, we requested and allowed people
14 to make presentations.

15 And so, right after Jennifer has her
16 presentation, Brian Rude will have a short presentation,
17 and then we'll get into the stakeholder feedback
18 session.

19 And so, even though it says from 12:55 to
20 2:00 p.m., there's a small 10-minute presentation by
21 Brian Rude. And at that point in time, I'll have him
22 up at the table speaking into a mic.

23 After we've gone through that topic, we'll
24 go through the third topic and Kris Banovac will do that.

25 And that is on applicability, compatibility and

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1 consistency of spent fuel storage requirements and
2 guidance for specific licensees, general licensees and
3 certificate of compliance holders. That's a mouthful.

4 Speaking of mouthfuls, there will be lots
5 of acronyms tossed around today. And I'm asking the
6 speakers, especially the NRC staff, to ensure that they
7 really define what those acronyms are before they start
8 using them.

9 I think most people in our audience today
10 are familiar with them, but remember you're developing
11 a transcript that's accessible to anyone.

12 So, after Kris does her presentation, we
13 will have another about hour and five minutes for
14 feedback again asking the question whether the staff
15 has identified everything and whether their treatment
16 so far appears to be complete. And so, again we'll be
17 reaching out to you.

18 Right now we have a scheduled break at 3:15
19 to 3:30. And then for the final technical meet of the
20 day, John Goshen will be talking about administration
21 of storage Certificates of Compliance and amendments
22 to Certificates of Compliance again followed by the
23 stakeholder feedback session.

24 Again, I'll be reaching out to the people
25 here, and the remote participants. Sometimes I'll go

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1 directly to the people here in Rockville first,
2 sometimes I'll go to the phone just to keep people on
3 their toes.

4 And finally at the end of that, you know,
5 staff are trying to present these things in little bites
6 on specific things, but there are things that you might
7 hear and say, well, this is really applicable to the
8 next session.

9 And so, this wrap-up session at the end is
10 to kind of come back and say, well, now that we've heard
11 all of these things and had this discussion, does
12 something else pop up?

13 And so, I think at the end of that, Mike
14 might have some final wrap-up comments and kind of laying
15 out where we're going to go. And the object - or we're
16 planning on adjourning at five o'clock today.

17 So, if there are any questions about
18 logistics, raise your hand right now. Otherwise, I
19 think I'll turn the meeting over to Mark Lombard and
20 we'll go from there.

21 MR. LOMBARD: Okay. Thank you, Bret.

22 As you can see, Bret runs a tight ship.
23 So, be careful we don't get out of compliance today with
24 his rules and regulations.

25 My name is Mark Lombard. And as some of

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1 you know, but maybe not all of you know, I've been the
2 Director, Spent Fuel Storage and Transportation
3 Division within Nuclear Fuel Storage and NMSS, Nuclear
4 Material Safety and Safeguards, for about seven weeks
5 now.

6 So, I'm just still kind of getting my feet
7 wet in some areas, but also enjoying the learning and
8 getting to know a lot of you folks too within the industry
9 and our stakeholders from the public. So, I was pretty
10 honored to have the opportunity to day to welcome you
11 all to our workshop.

12 We're looking at improving our NRC license
13 and inspection programs for spent fuel storage and
14 transportation under 10 CFR Parts 71 and 72.

15 I hope to contribute to today's dialog by
16 sharing our independent regulatory perspective and
17 providing a broad overview of the NRC's current major
18 activities relating to spent fuel storage and
19 transportation.

20 The NRC is responsible for ensuring the
21 safety and security of spent nuclear fuel during
22 storage, transportation and ultimate disposal.

23 We do that primarily through our licensing
24 and certification actions, inspection and sometimes
25 enforcement.

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1 It is neither the role nor responsibility
2 of the NRC to promote or advance one option for storing,
3 transporting or ultimately disposing of spent nuclear
4 fuel over other options.

5 Options for storing and transporting spent
6 nuclear fuel are driven by open market activities,
7 industry needs and the administration in the case of
8 an eventual repository.

9 Our responsibility in this area is to ensure
10 that whatever course of action is selected, that it's
11 implemented in a manner that protects public health and
12 safety in accordance with our requirements.

13 I'd like to take this opportunity to provide
14 you a status of a few important and ongoing NRC
15 regulatory activities related to spent nuclear fuel
16 storage and transportation.

17 The three topics that I'll briefly cover
18 are waste confidence, extended storage and
19 transportation review and NRC's response to the
20 Fukushima-Daiichi accident.

21 An issue that has been of significant
22 interest to many in the NRC, is the NRC's waste
23 confidence findings.

24 The waste confidence decision is our
25 assessment and associated rulemaking that generically

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1 evaluates and establishes the NRC's degree of confidence
2 in the safe storage, management and final disposal of
3 high-level radioactive waste.

4 It provides the NRC's generic finding not
5 specific to any individual site or licensing action,
6 that there will not be a significant environmental
7 impact due to storage of spent nuclear fuel.

8 It is not an NRC decision regarding
9 licensing of nuclear power plants or authorized storage
10 of spent fuel.

11 Rather, the waste confidence decision
12 resolves generically and removes from case-by-case
13 consideration one aspect of the environmental analysis
14 required under the National Environmental Policy Act,
15 or NEPA.

16 In order to meet our statutory requirements
17 under NEPA and the Atomic Energy Act and enable the
18 Agency to make an informed licensing decision about a
19 nuclear power plant, the NRC will still conduct a
20 comprehensive and site-specific environmental review
21 and safety analysis.

22 The waste confidence rule alone is not
23 sufficient to meet this obligation and does not
24 pre-approve storage of spent fuel anywhere.

25 The Commission updated their waste

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1 confidence decision most recently in 2010 revising the
2 time frames associated with the NRC's confidence and
3 the availability of a disposal site, along with its
4 confidence and the length of time spent nuclear fuel
5 could be stored safely.

6 However, several states, environmental
7 groups and the Prairie Island Indian Community
8 challenged the 2010 waste confidence update on grounds
9 primarily relating to aspects of the NEPA analysis
10 supporting the decision and rule.

11 In June of 2012, the US Board of Appeals
12 for the District of Columbia Circuit Court vacated the
13 2010 waste confidence decision rule holding that; number
14 one, the waste confidence decision rulemaking is a major
15 federal action necessitating either an Environmental
16 Impact Statement, or EIS, or a Finding
17 of No Significant Impact, FONSI, and; number two, the
18 Commission's evaluation of the risks of spent nuclear
19 fuel for at least 60 years beyond the license life for
20 reactor operation and 60-year post-operating period is
21 deficient.

22 On August 7th, the Commission issued an
23 order which in part says, we will not issue licenses
24 dependant upon the waste confidence decision or the
25 temporary storage rule until the court's remand is

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1 appropriately addressed.

2 This determination extends just to final
3 license issuance. All licensing reviews and
4 proceedings should continue to move forward.

5 The order states that the Commission is
6 considering all available options, and we expect them
7 to communicate with the staff soon with their decision.

8 As this is an ongoing issue still being
9 discussed with the Commission, we are not able to share
10 more details today. But we will be sharing information
11 with you and posting it on a public website hopefully
12 soon as it becomes available.

13 The Agency is moving forward with its
14 long-term review of the regulatory framework for spent
15 nuclear fuel storage and transportation.

16 As part of this review, we are assessing
17 the applicability of current regulations and guidance
18 for ensuring safe and secure storage and transportation
19 for extended periods beyond 120 years.

20 The Agency has developed a plan for this
21 comprehensive multi-year effort. This plan aims to
22 improve the regulatory programs for extended storage
23 and transportation by enhancing the technical and
24 regulatory basis of the existing regulatory framework,
25 and identifying possible changes that may be needed to

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1 continue ensuring safe storage for extended periods and
2 subsequent transportation.

3 As part of this effort, the Agency will also
4 undertake research regarding the safety and security
5 of extended storage and transportation.

6 On May 3rd of this year, the NRC staff issued
7 for public comment a draft assessment of Technical
8 Information Needs, that is, a TIN report, affecting the
9 age-related degradation of dry cask storage system
10 components for commercial spent nuclear fuel that may
11 require additional research.

12 This report synthesizes the information
13 from existing studies and provides the staff's
14 assessment of how age-related degradation phenomena
15 could affect performance and staff evaluation of
16 regulatory compliance of future extended storage and
17 transportation activities.

18 In the draft report, the staff identifies
19 for further investigation a number of high-priority
20 areas and the potential impact on the dry cask system's
21 ability to perform safety functions and satisfy our
22 regulatory requirements.

23 Priority areas for further investigation
24 include the potential for stress corrosion cracking of
25 stainless steel canisters in specific environments, the

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1 impact of cladding stress from fuel swelling or
2 pressurization, the effective degradation of cask bolts
3 on the inner containment environment, the effects of
4 residual moisture after drawing and the need to improve
5 thermal calculations and methods for monitoring and
6 inspecting in-service dry storage systems.

7 The staff has begun technical
8 investigations in some of these areas, and is developing
9 plans to address the remaining information needs,
10 including engaging DOE, industry and other researchers
11 conducting technical work in these areas.

12 We are currently in the process of
13 finalizing the TIN report to resolve stakeholder
14 comments from various individuals and parties,
15 including the public, industry, state governments and
16 tribes. We expect that the final TIN report will be
17 published in late fall of this year, 2012.

18 Throughout these efforts, the NRC has
19 engaged a broad range of stakeholder groups through
20 public meetings, workshops, conferences and other
21 outreach efforts to ensure the Agency benefits from
22 their perspectives. Staff will continue to engage
23 stakeholders as it proceeds with this EST review.

24 Another major ongoing Agency initiative
25 which may impact spent nuclear fuel storage and

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1 transportation stakeholders in the future is NRC's
2 response to the Fukushima-Daiichi accident.

3 Immediately following the earthquake,
4 tsunami and resulting nuclear accident, the NRC staff
5 conducted a lessons learned review of the event to
6 determine if there were any lessons that could be applied
7 to the continued safety of US nuclear reactors.

8 Efforts include extensive interactions
9 with industry and other external stakeholders,
10 international organizations and activities, and the
11 Advisory Committee on Reactor Safeguards.

12 The NRC has continued a high level of focus
13 on implementing the lessons learned from Fukushima to
14 ensure steady progress will continue allowing for
15 stakeholder engagement consistent with our established
16 schedules.

17 Following the event at Fukushima, several
18 stakeholders submitted comments to the Commission and
19 to the staff requesting that regulatory action be taken
20 to require expedited transfer of spent fuel to dry cask
21 storage.

22 Based on past studies, the NRC concluded
23 that both spent fuel pools and dry casks provide adequate
24 protection of public health and safety and the
25 environment, and that the likelihood of an accident

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1 involving a radiological release from the spent fuel
2 pool remains extremely small.

3 While the staff concluded that public
4 health and safety is adequately protected, it also
5 determined that it should confirm using insights from
6 Fukushima, that both spent fuel pools and dry cask
7 storage continues to provide adequate protection and
8 assess whether any significant safety benefits or
9 detriments would occur from expedited transfer of spent
10 fuel to dry casks.

11 The NRC's Office of Nuclear Regulatory
12 Research initiated spent fuel pool scoping study to
13 produce updated consequence estimates for scenarios of
14 interest related to spent fuel pools, as well as help
15 inform the NRC determination of whether a significant
16 increase in safety would be gained through expedited
17 transfer of spent fuel to dry cask storage.

18 This study in addition to the NRC's longer
19 term lessons learned actions that include gathering
20 stakeholder input, will determine whether further
21 regulatory actions are needed to require the expedited
22 transfer of spent fuel stored in pools to dry cask
23 storage.

24 Most recently on July 13th, 2012, the staff
25 provided the Commission with its plans and schedules

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1 for exploring this area, along with other Fukushima
2 lessons learned recommendations.

3 Once the scope of this research is fully
4 understood, the staff plans to provide an update to the
5 Commission with any revisions to the plan, along with
6 a schedule for completion of the effort.

7 Although the staff remains primarily
8 focused on the implementation of the Fukushima
9 recommendations at power reactor facilities, it will
10 also begin assessing the applicability of the
11 recommendations to other regulated facilities such as
12 dry storage facilities as resources become available.

13 So, that brings us to today and tomorrow's
14 workshop. The objective of this workshop is to obtain
15 your feedback, your input on identifying improvements
16 to our current licensing and inspection programs for
17 spent fuel storage and transportation.

18 We have over 25 years experience with dry
19 cask storage, and the safety record for storage and
20 transportation has been excellent.

21 However, as an organization committed to
22 continual learning and excellence, this is an opportune
23 time to reflect on our regulatory programs and identify
24 potential effectiveness and efficiency improvements.

25 External stakeholders and our staff have

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1 identified five areas for potential improvement. These
2 potential improvements are the focus of the workshop's
3 dialog.

4 While we're not here to address long-term
5 storage technical issues of the potential policy issues
6 associated with waste confidence, an effective
7 regulatory program needs to support resolution of these
8 issues.

9 The effectiveness of near-term program
10 improvement should be realized independent of the
11 long-term technical and policy issues.

12 These improvements will inherently benefit
13 both near-term storage and transportation activities
14 and any long-term storage and transportation course that
15 the nation may choose to pursue.

16 This workshop is aimed at bringing together
17 interested stakeholders for providing a valuable forum
18 for the exchange of ideas for increasing effectiveness
19 and efficiency of current regulatory framework for spent
20 fuel storage and transportation.

21 We appreciate your open and honest
22 communication during this workshop to meet this
23 objective.

24 So, in conclusion, we are keenly aware of
25 our important regulatory responsibilities regarding

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1 spent fuel storage and transportation, and we have
2 undertaken a number of important initiatives to ensure
3 that the Agency's licensees continue to manage these
4 materials safely and securely.

5 I appreciate your interest and
6 participation in this effort, and look forward to an
7 active and productive dialog. Thank you.

8 FACILITATOR LESLIE: Thank you very much,
9 Mark. And before I see if there are any questions for
10 you and move on to Mike, a couple of things.

11 A couple people came in late. The handouts
12 are here in the back. And if you didn't sign in when
13 you first came in, there's a sign-in sheet here.

14 You don't need to do it now, but perhaps
15 at a break sign in so we can have a correct list of
16 attendees.

17 Were there any questions for Mark?

18 MR. McCULLUM: Yes, is this working?

19 FACILITATOR LESLIE: Yes, and identify
20 yourself, please.

21 MR. McCULLUM: Rod McCullum, Nuclear Energy
22 Institute. Good morning, and thank you for holding this
23 workshop.

24 I have two questions, and they're kind of
25 unrelated. And I really appreciated you breaking down

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1 those three areas. Indeed, those are significant areas
2 to us.

3 I also understand that you're reviewing
4 your options on the waste confidence in court now and
5 you talked about we'll know more soon.

6 Is there a way - is there a time table, an
7 expectation for any particular window of time when the
8 NRC might make its plans public on that?

9 MR. LOMBARD: Based on the activities that
10 have occurred this last week or so, I think it's going
11 to be very soon.

12 MR. McCULLUM: Okay. I'll leave it -

13 MR. LOMBARD: And how soon is very soon?
14 Is it an hour, or a day or a week or a month? I'm thinking
15 more in a week time frame.

16 MR. McCULLUM: Okay, that's very helpful.

17 MR. LOMBARD: That's what we're hoping for.

18 FACILITATOR LESLIE: And I guess I would
19 suggest for us soft-spoken colleagues, to get close to
20 the mic because it's a little hard to hear in the back.

21 MR. McCULLUM: Oh, okay. I guess I'm being
22 picked up by the transcriber, but not necessarily by
23 the folks in the back of the room. I apologize for that.

24 The second question is the second item you
25 discussed, which is the extended storage review

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1 obviously has significant NEPA component to that -

2 MR. LOMBARD: Sure.

3 MR. McCULLUM: - and now you have this NEPA
4 challenge in response to the waste confidence ruling.

5 It seems like there's some synergy there.

6 To what extent are you looking at, you know, combining,
7 adjusting your efforts in those two areas?

8 MR. LOMBARD: I think I'm going to turn that
9 over to our folks from our sister division who are
10 helping us out in this area. Either Aby or Jim if you'd
11 like to respond to that, please.

12 MR. MOHSENI: Aby Mohseni, NMSS.

13 Rod, as you know, there is certainly a
14 relationship between what we learn in the extended
15 storage studies and insights we're going to gain that
16 would affect waste confidence. There's no question
17 about that.

18 That was the original plan if you recall
19 the SECY paper that the staff presented to the
20 Commission. It raised the value of that connection.

21 However, that was before the court ruling
22 which has a certain urgency to it. And that urgency
23 is where the NRC is at this moment deliberating, if you
24 will, where the balance is in terms of addressing the
25 court's decision. While at the same time, benefitting

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1 as much as possible from the research associated with
2 extended storage.

3 So, I think within a week or so as Mark
4 mentioned, we'll have the Commission's view on the rate
5 or the pace of addressing the court's ruling. At the
6 same time, recognizing the value and the synergism of
7 the two activities.

8 FACILITATOR LESLIE: Thanks.

9 Are there any other questions here in the
10 room before we turn it over to Mike?

11 I don't see anything. Julie, are there any
12 questions on the phone from any of the remote
13 participants?

14 THE OPERATOR: If you would like to ask a
15 question, please press star-1 and you will be prompted
16 to record your first and last name. Please unmute your
17 phone when recording your name. And to withdraw your
18 question, press star-2. One moment.

19 (Pause in the proceedings.)

20 THE OPERATOR: Showing no questions.

21 FACILITATOR LESLIE: Thank you, Julie.

22 One other thing that popped into my head
23 that I probably didn't talk about too much is the idea
24 of the parking lot.

25 I think Mark did a good job laying out that

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1 there are some other issues that are peripheral that
2 aren't the focus of the meeting today.

3 I'm going to be using the parking lot to
4 kind of make sure that we come back to them at the end
5 of the day. Or if, for instance, in one of the sessions
6 that we really want to follow something up in the
7 subsequent session, I'll use that to capture things.

8 So, with that, I'm going to turn it over
9 to Mike Waters and Kris Banovac who will provide an
10 overview of the licensing and inspection program
11 improvement review. Mike, Kris.

12 MR. WATERS: Thank you. Welcome. And as
13 Bret noted, myself and Kristina will tag team to this
14 presentation.

15 First, my name is Mike Waters. I'm chief
16 of the Licensing Branch in the Division of Spent Fuel
17 Storage and Transportation at NRC.

18 To my left is Kristina Banovac. She is our
19 lead project manager of this whole program and has done
20 a great job of putting this meeting together as well
21 as all the issues.

22 Out in the audience we have several of our
23 NRC staff who have done a great job of helping put this
24 together. And believe it or not, I see some familiar
25 stakeholders from the last meeting and past

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1 interactions.

2 We have incorporated some of your thoughts
3 into the current issue summaries, as well as on this
4 program today.

5 Second slide, please. With this overview
6 presentation, this is where we want to talk about the
7 overview, the what, the when and how.

8 Three key points we want to get across is
9 what we view as a new paradigm - the NRC is viewing this
10 effort in part as addressing a new paradigm.

11 We do have a process in place again led by
12 Christine Evers to do this comprehensive regulatory
13 review.

14 And I want to end with what is success at
15 the end of mine. And we really wanted to have feedback
16 on these three key points at the end of this session.

17 Do we have the right focus? What questions aren't we
18 asking? And what other things should we consider in
19 general?

20 Next slide, please. Before we get to the
21 paradigm question, a few background slides especially
22 for stakeholders that may not have the intimate
23 familiarity with spent fuel storage and transportation.

24 The NRC has a regulatory responsibility for
25 commercial spent fuel. If you look at the numbers,

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1 there are currently about a quarter of a million spent
2 fuel assemblies in the United States.

3 About a third of them are located at
4 Independent Spent Fuel Storage Installations. We often
5 call those ISFSIs. That's the first acronym.

6 Looking at the numbers, there are
7 approximately 1600 loaded dry storage casks. I believe
8 1400, 1450 are the canister-based where we put the fuel
9 in, then weld it up in canister and put in the concrete
10 overpack.

11 We have 150 or more of the metal casks with
12 bolted lids on them. And those casks sit outside in
13 an open environment on storage concrete pads.

14 If you look at the history about the major
15 technologies and all the variations, the innovation,
16 the new basket designs and canister designs, you could
17 easily count over 50 what I call approved storage design
18 variations.

19 So, part of the challenge is looking at this
20 from the perspective of the wide variety of technology
21 out there and all the variations.

22 Next slide, please. Another background
23 slide. You'll hear us talk about the regulatory
24 framework. What exactly is that?

25 From purposes of this talk today, this is

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1 what we're considering to be the regulatory framework.

2 Of course NRC has authority and direction from lots
3 of legislation. We list probably the two key ones here.

4 In this case here, Nuclear Waste Policy Act and Atomic
5 Energy Act. There's other legislation as well. Of
6 course Congress and the President established that
7 legislation at NRC.

8 NRC does establish regulations to safely
9 assure the safety and security, environmental
10 protection of spent fuel storage.

11 Parts 71, 72 and 50 are probably three key
12 ones you'll hear today - hear about today. Of course
13 there are other ones as well.

14 NRC has a lot of guidance both for
15 licensees, as well as guidance to staff, which provides
16 further interpretation to the regulations, as well as
17 acceptable needs to get the regulation.

18 And internally we have licensing and
19 inspection procedures that really defines how we operate
20 on a daily basis to accomplish our licensing and
21 inspection mission and other attitudes at the Agency.

22 Next slide, please. One last background
23 slide. Mark kind of touched upon this. We listed these
24 three activities. We're focused on the middle one here.

25 This is where we focus on improve the regulatory

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1 framework for storage and transportation under a new
2 paradigm.

3 We recognize those overlap with some other
4 activities. First of all, we continually have
5 challenging on cases to license new innovative
6 technologies and new contents. And there's always
7 challenges there, you know.

8 Right now there's some challenges with high
9 burnup fuel as most in the industry know, as well as
10 some renewal questions. And those overlap with some
11 of the regulatory questions we have and we're addressing
12 with the framework.

13 And of course as Mark noted, we are
14 developing a technical basis for extended storage and
15 transportation. Again, some issues today may
16 benefit/influence those longer term efforts as well.

17 Next slide. A new paradigm. As we all
18 know, we all know that the staff's repository attitudes
19 in the nation is not happening much right now. The Blue
20 Ribbon Commission came out with its recommendations
21 earlier this year.

22 I know the Department of Energy is reviewing
23 that and of course there's always a legislative and
24 executive focus on that.

25 I think fundamentally, I think the

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1 layperson would say that spent fuel storage is no loner
2 as temporary as initially expected. And someone said
3 NRC as a regulator, you know, should consider dry cask
4 storage of existing fuel maybe for unknown times.
5 That's a reality. That's what we must assume. And that
6 dry storage facilities may be more of a permanent fixture
7 on the back end of the fuel cycle.

8 The Commission has specifically said we do
9 not endorse indefinite storage. But it kind of
10 recognizes, and they use this word, recognize this.
11 And back in 2010, directed the staff to perform this
12 confidence review.

13 We developed a plan. I think it's
14 COMSECY-10-0007. In your slide handout, there's lots
15 of references to the staff's plans and evolution of those
16 plans. I won't go through that. So, we do have a
17 Commission mandate to look at this.

18 And the third part even outside of the
19 uncertainty with long-term storage, we do have two
20 decades of experience.

21 And this regulatory framework, we haven't
22 found any gaps in there. It's very safe. We have an
23 excellent safety record.

24 We have over time, both NRC and I know
25 industry and other stakeholders, identified areas where

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1 we can improve the effectiveness, the efficiency and
2 realism.

3 And again, part of our review in concert
4 with looking at the new paradigm is doing a confidence
5 review.

6 And with that, I'll turn it over to Kris
7 to give you a little more detail on exactly what we're
8 doing here. Kris.

9 MS. BANOVA: Thanks, Mike.

10 This slide provides an overview of the
11 staff's process for improving the current regulatory
12 framework. And in the next few slides, I'll get into
13 some details on our schedule and opportunities for
14 stakeholder involvement.

15 As Mike and Mark mentioned, we're
16 conducting the review of the Licensing and Inspection
17 Programs, which will reflect our experience with spent
18 fuel storage and transportation to date.

19 And the review will include addressing
20 issues that have been identified by staff and
21 stakeholders through our combined experiences.

22 Throughout the review we are engaging
23 stakeholders to get feedback. And we held a meeting
24 last July to get stakeholder input on both licensing
25 and inspection improvements.

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1 And we discussed two specific areas where
2 we could make improvements in licensing, and also our
3 inspection improvements. And I'll get into more detail
4 of what we heard at the July meeting in the next slide.

5 In this meeting, we hope to get your input
6 on the four licensing issues that we will be discussing
7 today, and also the inspection improvements and status
8 of that effort that we'll be discussing tomorrow.

9 We consider today's meeting and the
10 discussion of the four topics today to be an early
11 opportunity for stakeholder input. And the comments
12 and the thoughts that you share today will help to inform
13 our review.

14 During the review, we'll consider
15 stakeholder inputs and ultimately we will develop
16 recommendations for improving the regulatory framework.

17 And the recommendations may include changes
18 to regulations, policy, guidance or NRC's procedures
19 or processes.

20 Of course if we do have any recommendations
21 related to rulemaking or policy, we will be consulting
22 with the Commission on those.

23 And finally, we'll implement any framework
24 improvements as warranted or as approved.

25 Next slide, please.

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1 FACILITATOR LESLIE: Kris, before you move
2 on, could I ask you to use your bubbly enthusiasm to
3 speak a little bit louder?

4 MS. BANOVA: Yes.

5 FACILITATOR LESLIE: It's a little hard to
6 hear you in the back.

7 MS. BANOVA: Okay. Thank you, Bret.

8 So, this slide provides some input on our
9 meeting last July. That was our first public meeting
10 and we discussed two licensing issues. The
11 compatibility and integration of Parts 71 and 72 for
12 dual purpose casks, and we also talked about
13 streamlining the rulemaking process for Parts 72 cask
14 certification.

15 At this meeting, we received some great
16 inputs. One of the inputs we received with regard to
17 the compatibility and integration of storage and
18 transportation, was that there are several issues that
19 we'll need to address as part of our consideration of
20 integration of those frameworks.

21 And so, to address the input that we
22 received at that meeting, we are looking at
23 retrievability and cladding integrity as the lead issue
24 for storage and transportation compatibility. And we
25 will be discussing that in detail today. Bernie White

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1 will be presenting that presentation.

2 For the issue of streamlining the
3 rulemaking process for the Part 72 cask certification,
4 we had some good discussion at last year's meeting on
5 administration of our Certificates of Compliance, and
6 also some of the implementation issues with the use of
7 multiple Certificate of Compliance amendments at our
8 independent spent fuel storage installation, or ISFSI
9 sites.

10 And so, later this afternoon we'll discuss
11 more broadly how we administer our Part 72 Certificates
12 of Compliance and our amendments, and if there's any
13 improvements that we can make to that process.

14 Also at the July meeting we discussed
15 potential inspection improvements. And the staff did
16 consider the stakeholder feedback when it made its
17 recommendations last year.

18 And we also used last year's meeting as an
19 opportunity to talk about safety culture as NRC had just
20 issued its safety culture policy statement the month
21 prior.

22 And so, since the last public meeting as
23 Mike had mentioned, our thinking and our focus has
24 evolved after considering the input we received at that
25 meeting, participating in other stakeholder conferences

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1 and forums, and also having done some work in-house.

2 Next slide, please. So, this slide lists
3 some of the key issues in the regulatory review that
4 we will be discussing in this meeting. I think Bret
5 already reviewed these.

6 So, the four licensing issues,
7 compatibility of requirements for storage and
8 transportation with a focus on retrievability, cladding
9 integrity and safe handling, which Bernie White will
10 lead that discussion.

11 This afternoon Jennifer Davis will lead the
12 discussion on regulating standalone independent spent
13 fuel storage installations.

14 I'll discuss the issue of applicability,
15 compatibility and consistency of our storage
16 requirements in our storage framework.

17 And the last licensing issue today will be
18 John Goshen and Daniel Huang. And they'll discuss the
19 issue of administration of our storage Certificates of
20 Compliance and amendments to Certificates of
21 Compliance.

22 I do want to mention that since all these
23 issues are connected, we feel that we have to look at
24 them holistically to determine the best approach to
25 improve the framework. So, we're looking at all these

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1 issues together.

2 And of course the last issue that Neil Day
3 will discuss tomorrow is the status of our
4 implementation of our inspection improvements.

5 Next slide. This slide lists some of the
6 key milestones for our licensing review. As the staff
7 continues our review, we'll consider all the feedback
8 we receive at this meeting and will begin to develop
9 some options for addressing the issues that we're
10 discussing today.

11 Over the next year we plan to follow up with
12 a formal opportunity for stakeholders to submit comments
13 on the regulatory issues that the staff is addressing
14 in the licensing review.

15 And so, at this time we're planning to issue
16 a Federal Register Notice to solicit public comments
17 and stakeholder comments. And those comments will be
18 captured through the regulations.gov website and
19 process that we use for rulemakings and other documents
20 that we put out for stakeholder comment.

21 We will consider the comments we receive
22 through that Federal Register solicitation. And we'll
23 develop recommendations for improving the licensing
24 framework in the 2013 to 2014 time frame.

25 And of course once again if there are any

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1 policy issues or if the staff ends up recommending
2 rulemaking, we'll have to consult with the Commission
3 on those recommendations during that time.

4 If we identify the need to revise or develop
5 guidance, we could plan to start that in the 2013 time
6 frame. And if we go forward with any potential rule
7 changes, rulemaking most likely would not begin until
8 the 2015 to 2018 time frame.

9 And I do want to mention, I know Mark
10 mentioned it earlier, our extended storage and
11 transportation review, that's ongoing and it's being
12 done in parallel with this, quote, near term or current
13 framework review.

14 If the EST review identifies any changes
15 that are needed to the regulations, those could begin
16 in the 2018 time frame.

17 And so, for efficient rulemaking efforts
18 before initiating any rulemaking, the recommendations
19 that come out of this near-term licensing review, we
20 would of course consider where the extended storage and
21 transportation review is at and then coordinate any
22 rulemaking efforts as is appropriate.

23 I also want to mention that we will have
24 additional opportunities for stakeholder involvement
25 and implementation of any of the recommendations, which

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1 could include involvement and development of guidance
2 or of course involvement in any rulemaking efforts.

3 And last thing to mention on this slide is
4 our review continues to be shaped and informed by
5 internal and external activities related to spent fuel
6 storage and transportation. Some of which Mike and Mark
7 already discussed. And so, this is just a current
8 snapshot of where we're at with this review and our
9 schedule.

10 Next slide. This slide shows the key
11 milestones for the inspection review, which is on a
12 different schedule than the licensing review.

13 The working group for looking at inspection
14 improvements was chartered in April of last year. And
15 in September of last year, the team completed its review
16 and identified some recommendations to improve our
17 inspection program.

18 The staff has been working on implementing
19 those recommendations since management endorsement of
20 those recommendations in January of this year.

21 And the staff plans to complete
22 implementation of the recommendations, which include
23 updates to our inspection manual chapters and inspection
24 procedures in 2013.

25 And with that, I'll turn it back over to

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1 Mike.

2 MR. WATERS: Thanks. Yes, so thanks,
3 Kristina, for going over the process. And before we
4 start the dialog, I wanted to end a little bit
5 differently.

6 What is success? I think we're starting
7 to really focus on the end goals in mind. Not only
8 specific regulatory products and potential regulations
9 and guidance to change, but also what is success
10 criteria. And we want stakeholder feedback on this as
11 well.

12 We threw in a few bullets here of potential
13 success criteria. Of course the framework currently
14 provides safety for spent fuel storage and
15 transportation, and we want to make sure it maintains
16 continued safety.

17 We obviously are not going to do anything
18 that has some unintended consequence in that area. I
19 would not expect that to happen, but of course that's
20 the most paramount criteria here.

21 Of course we want some of the regulatory
22 policy issues, if there are any significant ones, in
23 this new paradigm and make sure are successfully
24 identified and resolved.

25 And as I mentioned earlier, we want to

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1 incorporate some of the two decades of experience to
2 improve effectiveness, efficiency and realism.

3 And another part of unintended consequence
4 is we want to make sure the framework remains flexible
5 for the uncertain future. The industry is really good
6 at devising new technologies, new ways to store and
7 handle fuel.

8 And we do recognize there may be future
9 changes in the National policy for spent fuel management
10 and we want to make sure the framework still remains
11 that flexible.

12 With that, those are ideas for the process
13 and success. And I guess we invite people to provide
14 any comments or questions, and don't feel shy coming
15 up to talk at the table. I see a lot of familiar people
16 out there. Bret, Charley. Brian, you can stay there.

17 (Laughter.)

18 FACILITATOR LESLIE: Thank you, Mike and
19 Kris, for teeing up the sessions today.

20 And, again, I'll remind folks if you're
21 interested, just raise your hand so I can bring the mic
22 to you. Or if you're sitting close to where there's
23 a mic, just raise your hand so I can acknowledge you.

24 I remind folks to identify yourself for the
25 record. And with that, are there any questions or

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1 comments now that Mike laid out - do you agree with his
2 idea of what is success, or do you have questions about
3 his overview?

4 MR. GUTHERMAN: My name is Brian Gutherman.
5 Gutherman Technical Services.

6 My remark pertains to the definition of
7 "success." And in particular, the first item,
8 "framework maintains continued safety."

9 I think we ought to - or you ought to weave
10 in there some mention of risk informing be focused on
11 safety, because I think there's a lot to be done in that
12 area with regard to spent fuel storage and
13 transportation and we could do a lot better with making
14 the rules and their implementation more effective if
15 we weave risk in there.

16 FACILITATOR LESLIE: Other comments or
17 questions for Mike or Kris here in the building? Well,
18 this is going to be a short meeting if people don't have
19 much to say, but that's okay.

20 MR. LOMBARD: Well, let me respond to Brian.

21 FACILITATOR LESLIE: Sure.

22 MR. LOMBARD: You bring up a good point and
23 it's something we've talked about internally. And as
24 you know, there's - Commissioner Apostolakis put out
25 a report on that very topic and we've very interested

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1 in how we may be allowed to move forward in that area
2 and do more as far as risk-informing spent fuel storage
3 and transportation activities.

4 So, it's a good point and we want to do more
5 in that area. So, we look forward to hear feedback on
6 that as we go forward.

7 FACILITATOR LESLIE: Okay. I'm going to
8 turn to this person here.

9 MR. WALDROP: Keith Waldrop with EPRI.

10 While not specifically the focus of this
11 conference today, one thing, Mike, in your presentation
12 caught my eye. Looking at on Slide 5, your key storage
13 and transportation activities looking at extended
14 storage, I see you chose the words to "develop a
15 technical basis."

16 Certainly, I'll use this term very broadly,
17 industry does need to develop that. And NRC's
18 involvement in the development of that, I think, would
19 be very welcome.

20 Typically, I think we hear that NRC research
21 does more of confirmatory research as opposed to
22 developing. But as we go forward and looking at the
23 funding required, we certainly would welcome NRC
24 research involvement in funding in developing that
25 technical basis.

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1 MR. WATERS: That's a good point and maybe
2 that wasn't the best choice of words. Often NRC when
3 we develop a regulatory framework and prepare for
4 regulating something in the future, we interchange the
5 word technical basis and regulatory basis.

6 I believe the original Commission direction
7 used the word "technical basis," and that's terminology
8 we've often had when, for example, when we implement
9 a new rule, we have a technical basis to that or
10 regulatory basis. We interchange that word.

11 That was really meant there. You are
12 correct. It's obviously, at the end of the day, the
13 industry has developed a technical basis to demonstrate
14 safety for extended storage and multiple renewal
15 periods. That's how we're looking at it.

16 And I think extended storage is really
17 probably looking at the second renewal for practical
18 purposes here and what technical basis is needed
19 surrounded by an aging management program is probably
20 within the normal framework.

21 So, you're right. We are doing research.

22 But I think as our colleague Bob would say, one primary
23 reason is to know what the right questions are to ask
24 to be able to independently verify the technical basis
25 and the aging management framework that would be

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1 provided for these future time periods.

2 So, that's what I meant by that. And our
3 colleagues over here at SFAS may have an additional point
4 on that, but it's a good point.

5 FACILITATOR LESLIE: Rod.

6 MR. McCULLUM: Yeah, Rod McCullum, Nuclear
7 Energy Institute.

8 Certainly welcome the theme that appears
9 in the definition of success in the new paradigm that
10 we need to become more effective, more efficient.

11 It's been recognized that all facilities
12 be loaded into casks and will be loaded in the coming
13 decades and the length of time storing it, that we're
14 going to have a lot of work to do. And when you have
15 that much work to do, you have to be more effective and
16 efficient.

17 And I think efficiency is the key. And I
18 think as Brian mentioned, doing that in a risk-informed
19 manner and taking advantage of the recommendations of
20 the Apostolakis task force is key.

21 Industry also has some ideas about how we
22 can make the framework more effective. I'm sorry, I'm
23 trying to speak in the microphone. I should be speaking
24 -

25 FACILITATOR LESLIE: Well, no. You need

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1 just to be closer and speak directly into it.

2 MR. McCULLUM: Oh, okay. There.

3 So, you know, and we see these as
4 complimentary and some of those we might not have much
5 discussion of this today, but I think where the linkage
6 is, is that you're going to have this Federal Register
7 Notice in January of 2013.

8 And you mentioned also that you had the July
9 meeting where we talked about streamlining the
10 certification process. And certainly that's an area
11 where Agency will have some recommendations.

12 Yes, I'd like to hear a little bit more about
13 what might be in that Federal Register Notice and
14 particularly hope that if industry submits some of its
15 ideas between now and then, will those also be discussed
16 in that Federal Register Notice as well as you're going
17 to talk about what you heard in the three meetings and
18 allude to the plans you might be considering is -- and
19 I'll have some unrelated questions after that -- but
20 I guess first I'd like to maybe talk about how that
21 Federal Register Notice might be an opportunity to kind
22 of bring together some of the ideas that we're working
23 on in industry, as well as some of the things you're
24 working on and are going to be talking about today and
25 start to see how we can take advantage of those synergies

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1 and knowing at what level of detail will that Federal
2 Register Notice address in the paradigm.

3 MR. WATERS: That's a good question. I
4 first of all ask to save that question - not save it,
5 but I'll try to respond now. But ask the question again
6 end of the day, and then maybe we'll focus it better.
7 We'll have a better focused answer.

8 Likely what you'll see in the Federal
9 Register Notice will be elements you hear about today
10 in the various presentations.

11 So, the Federal Register will be the formal
12 method to get stakeholder feedback on these issues in
13 writing.

14 If you submit something beforehand, we
15 actually talked about that in the past week. We'll try
16 to consider to the extent practical, but we're not going
17 to commit to incorporating it into the Federal Register
18 Notice or formally respond to his comments.

19 But of course comments and letters are
20 always welcome and we do our best to consider it, but
21 -

22 MR. McCULLUM: But recognizing that that's
23 out there and it's related and -

24 MR. WATERS: Right.

25 MR. McCULLUM: - it's already asked for and

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1 -

2 MR. WATERS: Right. So, risk-informed,
3 Mark mentioned I think it was our focus. We're waiting
4 for direction on that.

5 I'll be honest with you. In our original
6 plan, we talked about risk informing. Risk informing
7 is easier - it takes a lot of resources and time to do
8 so.

9 And to be honest, the last few years have
10 been a fluid nature of waste confidence and how the thing
11 has evolved and limited resources. And there are things
12 we can do without having to calculate the risk right
13 now to improve the effectiveness and efficiency, but
14 we do recognize fundamentally that risk is important
15 and it's something to continue to focus on.

16 To the extent we can, we'll try to - we'll
17 want to incorporate that, but it's a piece as everyone
18 knows from the reactor experience it was conforming and
19 looking at risk as well.

20 I don't think risk - I personally - this
21 is my perspective, I don't personally think we just can
22 say storage facilities have a lower risk than reactors
23 and we can fundamentally change regulations.

24 I don't know if it's that simple yes. It's
25 focusing our safety review and our regulations and a

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1 framework on what's important to get the greatest
2 effectiveness of our regulatory oversight.

3 Did I answer the question, Rod?

4 MR. McCULLUM: Yeah, I guess.

5 FACILITATOR LESLIE: Well, I think Brian has
6 a follow-up.

7 MR. GUTHERMAN: Yes, this is Brian
8 Gutherman, and I appreciate everything you just said,
9 Mike.

10 I would offer this: The element of
11 considering risk could be qualitative. And in
12 particular, understanding how the Part 50 facilities
13 currently manage risk. And that includes the dry
14 storage cask loading and movements to the ISFSI.

15 That's part their overall risk management
16 program with operating reactor. I think that's an
17 important element to that.

18 MR. McCULLUM: Yes, I guess I'd echo what
19 Brian said. Rod McCullum again.

20 You know, risk informing doesn't
21 necessarily mean we have to have detailed PRAs. We
22 actually do have two dry cask PRAs out there. The one
23 done - I believe it was like five years ago. So, by
24 EPRI and also by staff, which showed the risk to be very
25 low.

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1 But there are some qualitative things and
2 some comparative things that can be done with the Part
3 50 framework. And there certainly is a notion that has
4 to exist out there that because casks have no moving
5 parts and, you know, lower inventories than reactors
6 and all that, that they are intrinsically at a lower
7 risk.

8 So, there should be an ability to compare
9 how do we do this in Part 72 versus Part 50? With the
10 Part 72 is regulated in a higher level of detail than
11 Part 50, there's some risk informing that can
12 intuitively occur there.

13 There's also a notion of risk informing
14 which goes to the experience base, and I think you
15 alluded to this is that we need to capitalize on the
16 experience.

17 When dry cask storage first came on the
18 scene, it was as I always like to say, an unanticipated
19 solution to an unexpected problem.

20 There's not a future in this. You're
21 talking about the numbers that we've loaded and the
22 safety we have.

23 Again, looking at that experience and how
24 we've been successful in achieving safety isn't outward
25 risk informing. It doesn't require a PRA that we now

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1 - we were looking - you're looking at something new.
2 Obviously you regulate it differently than when you're
3 looking at something that has such a strong basis of
4 experience on.

5 MR. LOMBARD: That's an important topic that
6 we might have a future public meeting on that to solicit
7 ideas and maybe a potential path forward.

8 FACILITATOR LESLIE: I'm going to turn to
9 Julie and see if there are other things if anyone on
10 the phone wants to, and then I'll come back to the room.

11 MR. McCULLUM: Yeah, I have an unrelated
12 question.

13 FACILITATOR LESLIE: Okay. Julie.

14 THE OPERATOR: Once again to ask a question,
15 please press star-1. One moment.

16 (Pause in the proceedings.)

17 THE OPERATOR: I am showing no questions.

18 FACILITATOR LESLIE: Thank you, Julie.

19 Rod, you had another follow-up comment and
20 question?

21 MR. McCULLUM: Yeah, this is more a specific
22 question and a curiosity. Am I doing better with this
23 microphone? Okay. Yeah, I guess I just - I have to
24 be right on top of it, and I apologize yet again.

25 In one of your introductory slides here,

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1 Mike, I'm trying - oh, yeah. Slide 6, I believe it is.

2 You have - this is the new paradigm slide.

3 You talk about "spent fuel will be stored for much
4 longer time frames," which we certainly recognize the
5 challenges that imposes, "and transported with new
6 approaches."

7 Now, I'm looking at when I got involved in
8 this, the approaches to transportation seemed pretty
9 standard.

10 Is that simply a reference to dual purpose
11 casks, or is there something - is there something else
12 that you have in mind there when you say - what are the
13 new transportation approaches?

14 MR. WATERS: Well, it is dual purpose.
15 We're also thinking of new approaches such as using
16 moderator exclusion, addressing issues of high burnup
17 fuel, you know. The US has tried twice the TAD approach
18 or MPC approach. That could come back on the table,
19 packaging at the reactor plant for disposal in the
20 disposal canister for direct transport.

21 So, it wasn't meant to focus on a specific
22 idea in mind, but recognizing that we have evolved over
23 time.

24 The original storage casks were storage
25 only, and the industry has gone to dual purpose and

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1 continually to rely on overpack more and other things.

2 I think that probably goes to the heart of
3 some of Bernie's discussion on cladding integrity and
4 retrievability. We recognize the transportation
5 component of it is important in that issue as well.

6 MR. McCULLUM: Yeah, that was an excellent
7 clarification and I do encourage you to look at all those
8 areas. And moderator exclusion particularly is
9 something that we've been thinking about. And the whole
10 retrievability question, I think we'll have a good
11 discussion on that later. That's something of interest
12 to the industry.

13 FACILITATOR LESLIE: Okay. Any other
14 questions here in Rockville? I've got one over there.
15 Again, identify yourself for the record.

16 MR. CARLSEN: Brett Carlsen, Idaho National
17 Lab.

18 I guess I wanted to support what I've heard
19 from Rod and Brian on the importance of risk informing
20 or at least allowing that option. Because I think that
21 risk informing just allows us to rest upon our resources
22 and make sure we're getting the most safety for the
23 resources wherever they'll apply to any given problem.

24 But I also wanted to focus a little bit on the last
25 bullet on what is success where you talk about

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1 maintaining flexibility.

2 I think, if anything, what we've learned
3 over the past several years is that if we thought we
4 know about the future and we try to plan for it, we often
5 get ourselves backed into a corner.

6 So, I think that we could add the
7 risk-informed performance base to make sure that in our
8 regulatory framework we clearly specify the safety
9 requirements and the safety functions, but not get
10 ourselves too bored in on any particular approach to
11 achieving it so we can leave maximum flexibility in the
12 way we achieve that.

13 And I think again that there will be more
14 discussion along those lines when we get into the
15 following sessions in this meeting.

16 FACILITATOR LESLIE: Thank you. Any final
17 questions before we wrap up this overview by Mike and
18 Kris?

19 (No response.)

20 FACILITATOR LESLIE: All right. We're
21 running just a little bit behind, but that's okay.
22 We're scheduled for a 15-minute break. A couple
23 reminders and I'll let you know when we go to break.

24 But if you haven't signed in, please sign
25 in right at the post. The materials at in the back.

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1 The restrooms are at the far end of this corridor.
2 The men's to the left, women's to the right.

3 Here, it's 9:35 and we're scheduled for a
4 15-minute break. And we'll come back in 15 minutes and
5 start right up wit Bernie.

6 So, with that, we'll take a short break and
7 thanks for your participation so far. We're looking
8 forward to the rest.

9 (Whereupon, the proceedings went off the
10 record at 9:33 a.m. for a brief recess and went back
11 on the record at 9:48 a.m.)

12 FACILITATOR LESLIE: I'd like to welcome
13 everyone back here to the meeting. And one of the things
14 I didn't say is, yes, there are restrooms at the far
15 end of this corridor, but there's also a snack vending
16 machine, I think, out and down to your left.

17 And so, I think it also vends water and any
18 sugar that might be necessary to keep you awake for all
19 of this interesting discussion.

20 So, just to kind of recap where we are, had
21 some introductory comments by Mark Lombard. Then Kris
22 and Mike kind of laid out an overview and talked about
23 a new paradigm.

24 And at this point, we're going to turn it
25 over to Bernie to begin the first part of the technical

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1 session, more or less.

2 And, again, what Bernie's going to try to
3 do is to lay out the topic and the issues and some of
4 the considerations. And then we're going to be turning
5 to you to ask for your comments and questions.

6 And again, kind of the focus will be to,
7 you know, did the things Bernie said resonate with you?

8 Is there something missing? What other considerations
9 should NRC be thinking about as they go forward on this
10 first topic?

11 So, with that, Bernie, I'll turn it over
12 to you.

13 MR. WHITE: Thanks, Bret.

14 When Bret was talking about needing sugar
15 to stay awake, I didn't know if I should be offended
16 since I'm the next speaker, but I figured I only had
17 10 or 15 minutes. You guys got an hour and 15 minutes
18 and maybe you guys should be offended by that comment.

19 I don't know.

20 (Laughter.)

21 MR. WHITE: I'm going to talk about
22 retrievability, cladding integrity and safe handling
23 of spent fuel. There's been a lot of discussion over
24 the last year or so about retrievability and whether
25 it should be canister-based, fuel assembly-based,

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1 discussions on cladding integrity, maintaining cladding
2 integrity especially for high burnup fuel.

3 And then safe handling through the back end
4 of the fuel cycle, you know, going from the reactor pool
5 to dry storage to transportation and then wherever it
6 may go after the transportation portion. Which I'll
7 give a little bit of my thoughts about, about where we
8 may or may not be based upon recent discussions in the
9 federal government.

10 Next slide, please. The first two bullets
11 I won't cover very much. You've already heard a little
12 bit about this from both Mike and Kristina about where
13 we started and how we got started in this.

14 Commissioner Klein - or Chairman Klein at
15 the time issued his - the SRM came down from the
16 Commission telling us to look at how we do storage and
17 transportation and determine if there is a better way.

18 We responded back to that as Mike talked
19 about with the COMSECY, the project plan for regulatory
20 program review to support extended storage and
21 transportation.

22 In that, that's where the topic of
23 compatibility of storage and transportation was
24 discussed, broached, we got Commission approval to go
25 ahead.

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1 As they also mentioned, we had a public
2 meeting last year. July of last year. Three of the
3 things we heard at the public meeting were you need to
4 work on retrievability, burnup credit and moderator
5 exclusion before you go forward with this whole
6 compatibility issue.

7 So, that's what I'm here to do today to talk
8 about one of these, the lead issue for the compatibility,
9 which is retrievability.

10 As you probably know if you've been
11 following what we do, we've had a lot of discussions
12 and are working on a new interim staff guidance, revision
13 to interim staff guidance Number 8 on burnup credit.

14 There was an ACRS briefing, I believe, last
15 - was it last month, or this month? Earlier this month
16 on that. And I think we're going to be moving forward
17 with - I don't have the time frame since it's not my
18 project - with the final revision to the ISG.

19 Moderator exclusion, we sent up a
20 Commission paper on moderator exclusion in the 2007 time
21 frame asking permission from the Commission to go
22 forward and explore the regulatory options with that.

23 The Commission said, no, the time isn't
24 right for that. You need to go ahead and do as much
25 burnup credit as you can, and then get some experience

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1 with moderator exclusion before you look at the
2 regulations and whether or not they should be changed.

3 We've had some internal discussions on
4 that. We have not had - we've had very little experience
5 with moderator exclusion to date where we'd want to think
6 about changing the regulations.

7 When I say "very little," I don't mean none,
8 it's just we don't feel that we've had a sufficient
9 amount to move forward at this time. And a lot will
10 - a lot of that will fall out from where we end up after
11 the burnup credit ISG is issued.

12 There may still be some storage casks out
13 there - probably are some storage casks out there that
14 may need moderator exclusion.

15 And once we get a little bit more
16 familiarity with that based upon the Commission
17 direction, we'll consider moving forward with that.

18 Next slide, please. Little bit of
19 background. Mike sort of talked about most of the
20 background here. So, I'm going to slip down to the third
21 large bullet under regulatory guidance.

22 We have three ISGs that really come into
23 play. These are the main ones that come into play.
24 I didn't want to list all of our ISGs, but the classifying
25 the condition of spent fuel, ISG Number 1; ISG 2 on

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1 retrievability, and the third one on cladding
2 considerations for storage and transport.

3 This is part of our regulatory framework.

4 We'll be looking at the ISGs, as well as SRPs,
5 rulemaking, reg guides, the whole nine yards as we move
6 forward with our consideration of this topic.

7 Next slide. So, we get to the issue
8 description. Currently, we're evaluating the
9 compatibility of policies and regulations between
10 storage and transport. That's a mouthful right there
11 that includes a lot.

12 In storage, we're looking at things like
13 retrievability. Retrievability and storage. It's in
14 the regulations. We've defined it. We sent up a
15 Commission paper on it in 2001 indicating that currently
16 our policy on retrievability is per on a fuel assembly
17 basis.

18 Cladding integrity, cladding integrity
19 regulation 72.122(h) say no gross deformations. And
20 I'm paraphrasing there. So, bear with me.

21 Transportation, if you look at the
22 transportation regulations, it does not have the same
23 regulations as storage does when it comes to
24 retrievability and cladding integrity.

25 The transportation regulations have a long

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1 history that go well back - well beyond when the storage
2 regulations were instituted in 1988.

3 We do have regulations on the geometry of
4 fissile material after normal conditions of transport.

5 We have the criticality control where you have to
6 evaluate what to expect for under normal conditions of
7 transport and hypothetical accident conditions for
8 criticality control, and then we have opening and
9 unloading instructions.

10 And I bring these up because, you know, if
11 you were to transport fuel or transport material and
12 you expected it to be in a manner other than which you
13 load it in, you may want to have opening instructions
14 sent to the facility where it's going to be opened to
15 alert them to the fact to how they should open it, how
16 they should handle that material when it gets to their
17 facility.

18 And so, I guess the real question is how
19 do these three things under Transportation and two items
20 under Storage mesh, fit together in a compatibility
21 point of view.

22 Should there be retrievability after
23 transportation? Should there be cladding integrity
24 regulations after transportation?

25 That's kind of the opening salvo I'll throw

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1 out hoping that you guys think a little bit about this
2 and have some thoughts as we move forward into the public
3 comment period.

4 Next slide, please. So, considerations
5 for this topic. The first one is do we have a different
6 back end model prior to disposal?

7 Next slide. And if you were here at the
8 meeting last year, you probably saw a slide that looked
9 like this where we have storage at the reactor and it's
10 both in the pool and in dry casks.

11 Don't know at this point what the
12 determination is - or what the duration is for that
13 storage.

14 Back when we instituted the regulations for
15 storage, I think we were looking at maybe a 20-year
16 storage period, a renewal. You are now with Yucca
17 Mountain being partially off the table and no disposal
18 area. That at reactor storage as Mike has alluded -
19 Mike and Kristina alluded to or stated, is in an unknown
20 quantity.

21 Then, we have transportation of the spent
22 fuel which we always thought would go to a disposal
23 facility. That may or may not be the case now.

24 If you're familiar - next slide - with the
25 Blue Ribbon Commission, we may have an at reactor storage

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1 of an unknown duration, spent fuel transportation to
2 a centralized storage facility. And then storage there
3 for an unknown duration. And then transportation to
4 a disposal facility.

5 So, I'm just trying to bring these up to
6 give you guys something to think about, you know. If
7 we're going to go from storage to transportation to
8 storage again, you know, our regulation is not saying
9 that they don't fit and they are incompatible. Should
10 they be more compatible, is what we're looking at. And
11 if so, how compatible.

12 Next slide. So, I talked about the
13 different back end model. As you've heard, we've heard
14 already, we have longer storage durations.

15 I think initially we were talking 20, 40
16 years of storage. Now, we're looking at extended
17 storage up to 300 years potentially.

18 High burnup fuel, you know, high burnup fuel
19 is what's being unloaded today out of the reactor. It's
20 going to be something we're going to have to deal with
21 for a very long time. There's unknown material
22 properties for high burnup fuel at this point.

23 There's a lot of work being done on that,
24 but it may be a few years until we get some hard and
25 fast data that solidifies the position on high burnup

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1 fuel and what the material properties are like.

2 We're going to be looking at
3 transportation. Typically when I started doing
4 transportation back in the early '90s in 1990, you know,
5 you loaded this transportation package, you shipped it
6 off and then you unloaded it.

7 Now, we're looking at storage casks that
8 have been in storage for years, decades potentially,
9 and then being loaded into a transportation package and
10 then being shipped somewhere whether it's to a
11 centralized storage facility or a disposal facility.

12 How do we handle that aspect of storage and
13 transportation?

14 And then there's always the disposal
15 facility, the unknown disposal facility at this point.

16 Are they going to take what's already loaded in storage?

17 If not, will it need to be repackaged? If it does,
18 when would that be and whom would be doing that? Would
19 it be the organization running the disposal facility?

20 Would it be the reactors? Would it be somebody in
21 between? Unknown quantity at this point.

22 Next slide. So, I just want to list a few
23 considerations that we thought of here. I'm hoping that
24 there are more that you guys can bring out and give us
25 whether it's today or at a future date when we issue

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1 the Federal Register Notice.

2 If you look at retrievability from the big
3 picture point of view, as I said earlier, currently we
4 are doing individual fuel assembly retrievability.
5 Some of the considerations for that is that it maximizes
6 future handling options.

7 If you can pull the fuel assembly out and
8 it's in the same condition you put it in, it makes
9 repackaging a whole lot easier.

10 On the downside of that, though, is that
11 there's a lot of work being done now in the cladding
12 integrity area to ensure the retrievability. Part of
13 that is storage demonstration programs.

14 And then in the event we go to a disposal
15 facility where we need to repackage, there's a potential
16 significant impact on repackaging loaded canisters if
17 cladding - if cladding integrity cannot be demonstrated.

18 Essentially if you can't ensure that
19 cladding is maintained and it falls apart during
20 storage, our transportation start pulling out parts of
21 fuel assemblies.

22 Going for the canister-based
23 retrievability which sounds like the panacea that some
24 people think, it has upsides and downsides as well, as
25 does the individual fuel assembly retrievability. The

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1 canister-based relies upon the dual purpose canister.

2 Now, the downside to that is there may be
3 significant repack - or significant research on the
4 canister. Is that easier than fuel assembly research?

5 It overcomes some of the near-term
6 certification hurdles that we have now in terms of
7 cladding integrity and retrievability where it may, but
8 there is a potential significant impact if you need to
9 repackage the fuel later and it were to degrade during
10 storage.

11 And then, does the canister-based
12 retrievability limit future disposal options? Depends
13 upon what your disposal facility looks like potentially.

14 I'm not going to sit here and say I'm
15 promoting one of these over the other. We're still in
16 the information-gathering mode. And so, part of that
17 is listening to you, what our stakeholders have to say
18 in terms of which area we may want to consider more and
19 what considerations that come to the forefront.

20 Next slide. For cladding integrity,
21 typically during storage you rely on cladding integrity
22 to meet retrievability. Most storage certificates and
23 license applications show that cladding integrity is
24 maintained. Therefore, individual fuel assembly is
25 maintained. Also provides criticality control for

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1 geometry - or geometry control for criticality safety.

2 For transportation it does the same thing,
3 provides geometry control for criticality safety, but
4 it also allows safe handling and unloading - much easier
5 unloading and handling at the receipt facility where
6 the spent fuel is sent to.

7 Next slide. So, where are we now?
8 Retrievability and cladding integrity are potential
9 policy issues that more than likely will end up going
10 to Commission for based, in part, on the current
11 regulatory safety criteria and safety barrier concepts,
12 they present future and operational needs for storage
13 and transportation, consideration of technological
14 limitations in terms of material properties, and then
15 spent fuel management risks and uncertainties.

16 Next slide. So, this is where I stop and
17 turn the meeting over to you.

18 FACILITATOR LESLIE: Thanks, Bernie,
19 turning it back over to that obnoxious facilitator.

20 Couple things. I think Bernie did a great
21 job of teeing up the topic and kind of - I've listed
22 some questions and comments for the audience to kind
23 of keep in mind. They're about inclusiveness in the
24 sense, you know, Bernie identified the considerations
25 in his slides and remind yourself that there are

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1 regulatory issue summaries that also list these
2 considerations.

3 So, was there something that Bernie missed
4 in laying out his topic that we need to do? And I'm
5 not saying we need to go in this order, but this is for
6 us to keep in mind as we have this discussion and as
7 you guys provide feedback.

8 But for those that Bernie talked to and
9 already identified how we'd want to do that or how much
10 needs to be done, that was something that Bernie had
11 identified, how much compatibility is really required,
12 when is it, what aspects need to be enhanced relative
13 to what you heard?

14 So, those are just for you to kind of keep
15 in mind. And with that, I'm going to open it up to the
16 floor. We have quite some time to talk about this.

17 We, right now, are scheduled to go all the
18 way to 11:30. So, I'll probably come back to these at
19 the end to make sure that both the staff here have heard
20 what they needed to hear, and also to pulse the audience
21 both on the phone and here in the room.

22 So, I think I'm going to go first to the
23 people here in the room. If there's anyone, could you
24 just raise your hand and please identify yourself for
25 the record?

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1 And to remind folks of the ground rules,
2 I don't know how energetic this crowd is going to be.

3 But if you could limit your comments to about three
4 minutes first making sure everyone gets a chance, and
5 then we can always come back.

6 MS. SMITH: Hi. I'm Rebecca Smith with the
7 Idaho National Laboratory.

8 In combination with the consideration of
9 alternate back end models that you put up there and
10 thinking about considering burnup credit, would be good
11 also to think about how we might be able to capitalize
12 with performance-based criteria on the cool-down period
13 that the fuel is experiencing as it goes through those
14 various storage periods of unknown length. Thanks.

15 FACILITATOR LESLIE: Thank you.

16 MR. NICHOL: Marc Nichol from the Nuclear
17 Energy Institute - I'm trying to get the mic to work.
18 Okay.

19 To go to your first question there, I think
20 Bernie and the NRC has done a good job at laying out
21 all the considerations on this topic. So, I don't have
22 anything specifically in that, although maybe some of
23 my more detailed comments might identify something.

24 In general, I just wanted to - I have a
25 couple comments I'll go through, but I wanted to state

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1 that industry has been considering this topic for quite
2 some time and we are of the conclusion that there is
3 a great amount of benefit to what the NRC has defined
4 as a canister-based retrievability paradigm for the
5 future.

6 And we believe that such paradigm would
7 ensure safety through the regulations and allow for more
8 efficiency in implementing those regulations. And this
9 is really looking at some of the risk aspects of this
10 of the whole of retrievability and cladding integrity.

11 Specifically, now, when we talk about going
12 to a more canister-based retrievability option, we're
13 not arguing that we should not care at all about what
14 happens to the cladding.

15 In fact, we believe that many of the
16 regulatory limits that are already established in the
17 guidance provides for cladding integrity throughout the
18 storage and in transportation.

19 We recognize that there may be still some
20 technical bases that need to be developed in regards
21 to high burnup fuel and the conclusions of those
22 technical bases are undetermined right now.

23 But in this canister-based paradigm, we
24 believe much of the cladding would still remain intact
25 throughout the storage and transportation.

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1 For the limited amount of fuel that may not
2 remain intact or may not be able to meet a fuel
3 retrievable definition, we don't envision that the
4 consequences would be that significant.

5 We're not envisioning vaporization of
6 cladding at all. What we see - what we believe we would
7 see are some slight cracking which would not, in our
8 opinion, pose significant safety problems.

9 So, from that perspective, a canister-based
10 model would be more than adequate to assure safety.

11 Where some considerations may need to start
12 being given is in how the fuel is handled if it doesn't
13 meet a strict fuel retrievability definition, but I
14 believe that methods can be developed to handle fuel
15 in a safe manner even if it's not by normal means.

16 So, I believe when we look at this issue
17 from a safety perspective, there is a very strong safety
18 basis for a canister-based model.

19 There were a couple other things here. If
20 we also look at the overall risk involved in these two
21 options, in the fuel retrievability model there may be
22 a need for more canisterization of fuel, maybe high
23 burnup fuel. That will lead to two things.

24 One, there will be an increase in worker
25 dose just from handling and canisterizing fuel. So,

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1 there would be an increased risk there.

2 The other would be that many of the dry cask
3 systems would effectively be derated because they
4 wouldn't be able to handle all canisterized fuel. So,
5 there would be more packages in general to load and
6 transport, which would increase risks in those areas
7 as well. So, these offsetting risks, I think, are an
8 important consideration in that respect.

9 There are one or two just specific things
10 I wanted to mention in your presentation. And if you
11 go to Slide 7, you define a new back end model there.

12 And while it -

13 FACILITATOR LESLIE: A potential new back
14 end model.

15 MR. NICHOL: Yeah. And I might qualify it
16 as not necessarily new. I think the Nuclear Waste
17 Policy Act envisioned an option where there would be
18 centralized storage.

19 So, in that respect, it may be more
20 probable, but it's not necessarily new or unanticipated.

21 But certainly due to a high probability that this model
22 would be implemented, so it would also be a
23 consideration.

24 And we also agree that these longer storage
25 durations would certainly be a consideration. In fact,

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1 the current ongoing work for extended storage and
2 transportation up to 300 years.

3 And so, whatever near-term regulatory
4 changes may occur, should consider how they impact the
5 longer term storage there as well.

6 FACILITATOR LESLIE: Marc.

7 MR. NICHOL: Yes.

8 FACILITATOR LESLIE: Can I come back to you?

9 MR. NICHOL: Yes.

10 FACILITATOR LESLIE: Okay. Other people in
11 the audience here that have considerations that the NRC
12 staff should be thinking about?

13 Okay. I've got two in the back, and I will
14 come back to you, Marc. And don't forget to identify
15 yourself.

16 MR. CAPSTICK: My name is Bob Capstick. I'm
17 director of Regulatory Affairs for Yankee Atomic,
18 Connecticut Yankee and Maine Yankee.

19 And as long as we're talking about the
20 model, I just wanted to kind of put this into a
21 perspective that really hasn't been touched upon yet.

22 And that is if you look at the old model,
23 under the old model, the really old model, the utilities
24 routinely shipped fuel for reprocessing. Back in the
25 '60s and '70s, Yankee sites shipped well over 400

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1 assemblies for reprocessing.

2 And what changed is in the `70s and then
3 in the 1982 Nuclear Waste Policy Act, the Department
4 of Energy became responsible for picking up the fuel
5 at the sites and transporting it for either, as Marc
6 said, interim storage or disposal.

7 So, if you're looking at your new back end
8 model, the utilities are responsible for the Part 72
9 at reactor storage. After that, your licensee is the
10 United States Department of Energy, because they're the
11 ones responsible for transport, storage, potential
12 future transport and then disposal, not the utilities.

13 And it's my understanding that under the
14 regulations of Part 50, Part 72, there are no regulations
15 that require the utilities to maintain fuel handling
16 or cask unloading capabilities. Or even for that
17 matter, for the spent fuel at GTCC waste to be stored
18 in transportable canisters.

19 So, I think that's a very important
20 consideration with respect to your model and I just
21 wanted to raise that at this point.

22 FACILITATOR LESLIE: Thank you very much.

23 MR. CARLSEN: Brett Carlsen, Idaho National
24 Laboratory. I just wanted to follow up a little bit
25 on a few of the points that Marc made from NEI.

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1 I agree that the cladding efforts should
2 and - or would and should continue to be made to preserve
3 the cladding. I don't think that crediting the canister
4 is intended to allow us to give up any margin with
5 cladding, but I think the difficulty comes in years down
6 the road.

7 If our safety basis is based on cladding,
8 how do we demonstrate - inspect and demonstrate with
9 sufficient confidence to rely on that as our regulatory
10 basis? To me, it seems like that is problematic.
11 Whereas where the canister is inspectable, replaceable
12 and repairable if need be, I think that gives us more
13 flexible options.

14 Marc also mentioned that going to a
15 canister-based system could end up possibly downrating
16 or derating some of our cask systems. That may be the
17 case if we're going to a canister on the front end.

18 But if we're relying on the canister
19 primarily for the transportation phase, I think the
20 possibility exists that standardization on the back end
21 of storage where due to the cooling and the, you know,
22 the source term being decreased, you would have some
23 extra flexibility with reduced needs for shielding
24 thickness and there would be some options for
25 standardization that might, in fact, give us a fewer

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1 number of packages to transport by being able to
2 standardize multiple canisters to a limited number of
3 transportation casks.

4 I know there had been some ideas and
5 proposals put forward to look at that that I'm familiar
6 with in the past.

7 And lastly, I just wanted to pose a question
8 related to the length of the storage period. I know
9 we've talked about extending storage periods. The term
10 up to 300 years has been tossed around. Then, it comes
11 back to this performance-based criteria.

12 And my question is if we can establish truly
13 a performance-based criteria for getting a storage
14 license, what would be different if this is the first
15 storage license or the fifth storage license?

16 If our criteria make it clear that we're
17 confident, we've got another 40 years whether it's the
18 first period or the 21st period, I think we'd have a
19 solid case if we really have confidence in a good set
20 of performance-based criteria that we can inspect and
21 validate compliance with.

22 FACILITATOR LESLIE: Thank you very much.

23 Other questions and comments? And I'll
24 also turn it to the NRC staff if there's - when you hear
25 something and you want to follow up, just jump in so

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1 that you can get further clarification.

2 Other questions, comments? I'm going to
3 get back to Marc, and then go to you. And I'll remind
4 everyone even though you got a microphone, you've got
5 to be like you're on American Idol and just really
6 project.

7 MR. McCULLUM: You don't want to hear me
8 sing.

9 FACILITATOR LESLIE: I didn't say "sing,"
10 Rod.

11 MR. McCULLUM: But I do want to briefly
12 respond to the point the gentleman from Idaho National
13 Lab has raised here which is that in looking at a
14 canister-based approach, that does not mean we don't
15 care about the cladding.

16 In our paradigm, we'd hope to see be
17 created, but the cladding comes an important element
18 of that, it becomes safety margin, but front row of the
19 requirements focus on the canister as the waste form.

20 And I think now that slide's up there,
21 that's a good segue. I wanted in that context, I wanted
22 to respond to one of the issues raised on Slide 9, but
23 I want to do it with Slide 7 up on the screen.

24 So, I'll just - the idea of limiting future
25 disposal options as being a possibility, one of the

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1 potential downsides of going with a canister, you know,
2 retrievability based on the canister approach.

3 And I'd also concede that in addition to
4 another reason you still care about the cladding is,
5 you know, requirements can be exceeded. There may be
6 folks that might want to retrieve for recycling or
7 whatever who might want to load to a higher standard,
8 you know, with that in mind.

9 But in regards to what you see there, it
10 is indeed almost certainly, yet granted it was
11 envisioned in the original Nuclear Waste Policy Act that
12 there was an opportunity to go to direct disposal at
13 Yucca Mountain that has now been foregone. And with
14 the fuel at the shutdown sites, we need to move that
15 and we're working to move that to consolidated storage.

16 So, at least some of the inventory will have two steps
17 and this goes to risk informing.

18 The concern on Slide 9 that was raised that
19 we may limit disposal options if we go with
20 retrievability base - go back to Slide 7. Yeah, I'm
21 focusing on - I would not worry about that. Because
22 in a risk-informed perspective, you see we've got at
23 reactor storage which is 1500 casks now. Another decade
24 it will be 2500, so on and so forth, you know.

25 You've got whole transportation iteration

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1 and you've got a centralized storage iteration and
2 another transportation. That's where the real risks
3 are.

4 Let's regulate on what we need to take care
5 of that we know is before us. Yes, we may end up limiting
6 disposal options, but I'll point out a couple of things
7 here.

8 First of all, that might be a good thing
9 because I don't see DOE moving forward exactly at a brisk
10 pace. It's kind of like a chicken and egg thing or maybe
11 if you build it, they will come. If you make a
12 regulation, they'll have to design the repository to
13 the regulation and they may need that help.

14 I'll also point out an example of how that
15 might work. In the Yucca Mountain licensing process,
16 you remember there was the TAD which was the only
17 canister that could be disposed of in Yucca Mountain
18 without being reloaded.

19 They were going to dispose of about 85
20 percent of the fuel in TADs and they were going to then
21 unload and reload about 50, I think was the provision
22 in the license application.

23 Industry filed a contention based on some
24 technical analysis we had done through EPRI's auspices
25 to indicate that we thought that those DPCs that had

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1 already been loaded and would be loaded before we'd be
2 deploying TADs, could be directly disposed of in Yucca
3 Mountain.

4 So, while the original design in Yucca
5 Mountain was related to TADs, we felt the design - and
6 we felt had that licensing process continued, we would
7 have prevailed on that and the design would have been
8 modified to allow for direct disposal of the DPCs.

9 Now, right now we're hearing a lot about,
10 you know, different geologies require specific
11 canisters because everybody is saying the driving
12 function should be the heat load that the repository
13 meets. And that's driven entirely by uncertainties.

14 We don't know that hot rocks are bad. We just don't
15 know as much about hot rocks, because the rocks aren't
16 hot naturally, except in volcanoes. And we're not going
17 to dispose in an active volcano.

18 But, you know, I think if NRC in a
19 risk-informed manner focused on the risk and the need
20 to assure safety at those first four steps, I think the
21 folks designing Step 5 there will be smart enough to
22 figure out how to dispose of what we've left them with
23 when we do everything we need to do to assure safety
24 to current and near-term future generations in
25 accordance with those requirements.

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1 So, I guess what I am telling you is just
2 build it, and they will come in terms of, you know, don't
3 wait for DOE to define a disposal design. Define a
4 regulatory regime that makes sense, and DOE will have
5 to engineer a disposal concept that meets what makes
6 sense, which would be novel.

7 FACILITATOR LESLIE: Thanks, Rod. And I'm
8 going to get back to you, Marc, but NRC staff had some
9 follow-up questions.

10 I'm going to go to Bernie, and then I'm going
11 to go to Earl. So, Bernie.

12 MR. WHITE: I have a very simple question
13 geared towards the comment you made, Marc, about the
14 industry is looking more towards a canister-based
15 retrievability.

16 Is that only for storage? And the reason
17 I ask that is if you go back to Slide 3 or 4 right there,
18 what we're looking at here is not only storage, but
19 transportation.

20 Should there be a retrievability
21 requirement for transportation? So, I just want to
22 throw that out as a question for you.

23 MR. NICHOL: Well, let me clarify. When I
24 talked about canister-based retrievability, I was
25 trying to use your terminology -

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1 MR. WHITE: Yeah, I understand that.

2 MR. NICHOL: - rather than our own. But
3 what we're really looking at is a more risk-informed
4 defense-in-depth type of approach to how the canister
5 confinement or containment boundary is credited or used
6 in the safety design and how the cladding is used in
7 the safety design.

8 And really what we're looking at is the
9 canister's confinement or containment being the primary
10 boundary to perform those safety functions in
11 criticality - well, dose and confinement/containment.

12 What we're looking at, the cladding is
13 really - it is a risk - it is a defense-in-depth. And
14 certainly it's a defense-in-depth in the context of
15 appropriate risk.

16 And so in that respect, that's why I made
17 the comment that most of the fuel will still have
18 cladding that maintained its integrity. And under
19 storage, would be defined as fuel assembly retrievable.

20 Although it wouldn't be a requirement, it would just
21 be part of the defense-in-depth approach.

22 And so, there certainly would be or there
23 could be some assemblies that did not maintain cladding
24 integrity, but it would be evaluated and the risks would
25 be determined acceptably low. And that's mainly in the

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1 context of storage.

2 When we look at transportation, of course
3 there is no definition - there is no requirement for
4 retrievability and we're not proposing that a
5 retrievability needs to be introduced into
6 transportation.

7 We recognize that the approach for control
8 there is through the geometry and criticality control,
9 but believe those can be achieved primarily by the
10 canister. And the canister can preclude the intrusion
11 of water. That might be how you can control
12 criticality, and then also through the containment
13 boundary there to not release any radioactive material.

14 But beyond that it would also look at what
15 is a credible reconfiguration. And perhaps a lot of
16 the assemblies would not reconfigure at all. They would
17 maintain their integrity, but maybe some would.

18 And so, we've been looking at that credible
19 reconfiguration with the preclusion of water intrusion.

20 So, I don't know if that answered your
21 question or not.

22 MR. WHITE: It does.

23 MR. NICHOL: Okay.

24 MR. WHITE: It gives me the sense that you're
25 talking about a holistic approach as opposed to looking

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1 at each of the different parts separately, which is kind
2 of where I was going here.

3 MR. NICHOL: Right.

4 MR. WHITE: And I use the words
5 "retrievability," because everybody knows what we mean
6 by that.

7 MR. NICHOL: Yes. And that's what I did.

8 I primarily used retrievability talking about storage,
9 but it would be - it would be a canister cladding
10 defense-in-depth approach that would transcend both
11 Parts 71 and 72.

12 MR. WHITE: Okay.

13 MR. NICHOL: Which would give the
14 consistency between the two parts.

15 MR. WHITE: Okay.

16 FACILITATOR LESLIE: Thank you, Marc.

17 Bernie, you're fine?

18 MR. WHITE: Yes.

19 FACILITATOR LESLIE: Okay, Earl.

20 MR. EASTON: Hi. Earl Easton. I'm with the
21 NRC staff.

22 I have a question to industry. Maybe they
23 can help with - go back to Slide 7. Okay. If you look
24 at the first part, it says Part 72 at reactor storage.
25 If we're talking about such long time frames, there's

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1 a possibility that the reactor is no longer there, you
2 know.

3 Once you go out 40 years, plus 20 years
4 renewal, the reactor may no longer be there. The
5 loading pool may no longer be there.

6 So, can you give me what your thoughts are
7 on how you would repackage a canister-based system
8 versus an assembly-based system, and what you think the
9 relative risks of those two operations would be?

10 MR. NICHOL: Well, if you're looking at
11 repackaging fuel from one canister to another canister
12 and if you're looking at the canister-based model welded
13 systems, and there are bolted systems, we can discuss
14 those if you want as well, to repackage the assemblies
15 you're going to have to cut open the welds, take off
16 the lids, and then you're going to have to transfer them.

17 Certainly could be done in a wet environment
18 in the pool, or possibly through some dry transfer system
19 which hasn't been proven up to this point, but certainly
20 could be performed.

21 If you're looking at repackaging under a
22 canister-based system, what you're looking at is taking
23 that welded canister and putting it inside of some type
24 of new overpack which that technology may not really
25 be demonstrated right now as well, but it could be some

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1 type of thin-walled sleeve or something that would cover
2 it and could seal it and provide a new or a redundant
3 confinement boundary.

4 If you look at the relative risks, the risks
5 are much higher on the fuel transfer to a new package
6 rather than placing a package inside of a new
7 envelope-type.

8 MR. McCULLUM: And I think, Earl, if I can
9 add to that, Brett, that's where looking at it from a
10 risk-informed perspective comes into mind. And there's
11 a temporal component of risk here.

12 Again, these are not operating reactors
13 that have to be shut down. If we discovered a need in
14 a shutdown site that we're going to have to repackage,
15 we have time to adjust that, you know. Things aren't
16 going to rapidly degrade on us here.

17 And then we're certainly putting in place
18 programs. We talked about a demo program. We talked
19 - EPRI's already doing these inspections of canisters
20 looking for incipient signs of corrosion and all those
21 sorts of things that will be in our aging management
22 plans, you know. We have an opportunity to adjust.

23 Now, as Marc said, the default position at
24 industry at any of those sites that don't have pools
25 anymore would be avoid having to repackage and look at

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1 all strategies that go down that road.

2 And of course that becomes more tenable if
3 you have a consolidated facility and if that
4 consolidated facility has the capabilities, you know,
5 to handle - to bring canisters into a hot cell or whatever
6 if they had to.

7 It's a great argument for consolidated
8 storage. But as Marc said, putting it in another
9 envelope, for example, that - and then finding a special
10 way to transport that getting it to that facility where
11 they have the capability.

12 But, again, you got to look at the relative
13 risks and the temporal component here is that we would
14 have time to address that.

15 And I think the first position would be to
16 address that and let's see if there's a way we can do
17 it without having to repackage at that site.

18 FACILITATOR LESLIE: Earl, did you want to
19 follow up?

20 MR. EASTON: The reason I brought this up
21 is, you know, the NRC goes and does a lot of outreach
22 with states. And if you're locating a storage site in
23 states, the first thing they ask to is, is this just
24 a storage site and you're not going to be reprocessing
25 fuel, or is this a site that at some day you may have

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1 to repackage, and what does that - and it's a whole
2 different set of risk considerations that you probably
3 have to know up front to get people to buy into siting.

4 And that's why I brought it up to see whether
5 you guys have thought about that in that context.

6 MR. McCULLUM: Yeah, not only have we thought
7 about. We're actually interacting with the Department
8 of Energy on it right now. There's a workshop going
9 on out in Idaho next month - or next week. This is the
10 whole idea of this demo.

11 And the end point - extended storage demo.

12 For those who don't know, that's where you put specially
13 instrumented casks to get realtime data and then
14 eventually open - set aside sister rods for comparison
15 in a pool and eventually open it up in a hot cell
16 somewhere. Which means you have to create the hot cell.

17 Our vision for that - which we don't have
18 now. Our vision for that is at some site where it is
19 seen as a valuable thing to have which research
20 capability and valuable economic opportunity, you would
21 build this capability. And this is part of establishing
22 the infrastructure that extended storage will need.

23 So, we're very actively interacting with
24 the Department on trying to create just the capability.

25 And it would only happen in a community that saw the

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1 benefit of having that kind of capability. And we
2 believe that anybody interested in consolidated storage
3 is interested in more than just a parking lot.

4 FACILITATOR LESLIE: Thank you. And that
5 was Rob McCullum, for the record.

6 MR. CARLSEN: Brett Carlsen, Idaho National
7 Lab again.

8 The question of retrievability and does it
9 come into transport versus storage, I think, is an
10 interesting question. Because as we know at present,
11 it's a 10 CFR 72 requirement, not a 71 requirement.

12 But the slide that was just up where we show
13 a storage period following transport, now we'd have it
14 applying in storage, not applying in transport and then
15 applying again after transport.

16 And I think if we're transporting fuel
17 that's been stored for many, many years, that becomes
18 questionable how we demonstrate retrievability
19 following transport.

20 I think historically we haven't applied
21 that requirement to transport because it's been assumed
22 that that applied only after an accident condition where
23 you're in a little bit of a different mode.

24 I think there's been some question after
25 storage during the normal transport loads just shaking

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1 that fuel down the road, could that bring the
2 retrievability into question? And that becomes very
3 difficult to verify.

4 And that's a reason I see if we base our
5 safety on retrievability of the canister, that's
6 inspectable and we don't have that hurdle to get over
7 for storage following transport.

8 And I guess I wanted to leave one other
9 question just for consideration regarding
10 retrievability. And that is to what extent is
11 retrievability truly a safety function as opposed to
12 a management consideration that affects cost, that
13 affects management flexibility?

14 It may affect our policy options. But
15 strictly from a safety perspective, I think an argument
16 can be made that all the safety functions can be met
17 through other means.

18 FACILITATOR LESLIE: Thank you.

19 MR. McCULLUM: Rob McCullum.

20 I just want to give that an amen on that
21 last point.

22 FACILITATOR LESLIE: Okay. All right.
23 I'll allow the amen.

24 Eric.

25 MR. BENNER: Hi. Eric Benner, NRC. And I

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1 just want to build upon what Brett said, because I
2 thought he raised some good points. Because we heard
3 a comment before of, you know, the risks aren't
4 necessarily at the first phase here. The risk can be
5 in the later phases.

6 But I think one of the things the staff is
7 challenged with is, you know, yes, indeed the risk may
8 be in the later phases, but are there things we could
9 do in the early phases that could reduce those risks?

10 And that's where you really have to look
11 at the difference between looking at these segments as
12 segments. Because, you know, you may ask certain
13 questions in that first segment of storage at reactor
14 and get one set of answers. But if you're trying to
15 look at this holistically, you may get a different set
16 of answers as to the things you need to do.

17 The other comment I wanted to make is about,
18 again, the, you know, what is retrievability and what
19 is it good for?

20 We talked a little bit about, oh, well, you
21 know, if we reduce the number of disposal options, that
22 may drive DOE to have to accept what we have. And we
23 have to be very cautious about doing that, because that
24 sounds to me like all of a sudden the NRC by its decisions
25 on how it licenses things, would be setting National

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1 policy. And that's not our role.

2 So, there's policy issues and we're going
3 to raise those to the Commission, but that seems like,
4 you know, a capital, underline, bold policy issue that
5 if all of a sudden we make that change knowing that it
6 means that DOE all of a sudden has to accommodate what
7 we're going to do, that would need to not only go to
8 the Commission. I think that would need to be vetted
9 with a broad number of stakeholders.

10 FACILITATOR LESLIE: Thank you, Eric.

11 I'll get back to you - well, actually I'll
12 come back to you in a second. Marc, go ahead.

13 MR. NICHOL: Yeah, I just wanted to add
14 something to that.

15 In our vision of this more defense-in-depth
16 type of approach, it would - I believe the risks should
17 be considered holistically. I think that is important.

18 And we don't want - we don't want to set
19 National policy on a regulatory issue. I can certainly
20 agree with that.

21 However, in my perspective and our opinion
22 is that going to this more defense-in-depth model that
23 doesn't require cladding integrity and retrievability,
24 but does strive for it, we wouldn't be limiting options
25 for disposal.

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1 I think that even if the fuel needs to be
2 repackaged for disposal, that much of the fuel will still
3 be intact and can be handled. And those that may have
4 slight degradation issues could still be handled safely
5 and at low dose.

6 And so, I believe once those are considered
7 - and that's why I introduced the concept of acceptably
8 low risk and why there still would be some regulatory
9 limits for the cladding when - just say the vacuum drying
10 limit of temperature to help maintain cladding integrity
11 in most cases.

12 But going from the regulatory requirement
13 to a defense-in-depth risk-informed acceptable risk
14 approach would have a lot of benefits, but still ensure
15 safety.

16 FACILITATOR LESLIE: Thank you, Marc.

17 MR. HAUGHNEY: Charley Haughney, retired NRC
18 and member of the nuclear community.

19 I just thought I would mention one licensing
20 action from the past that doesn't solve the
21 retrievability problem, but it does get into the issue
22 of providing a bit more defense-in-depth for a site that
23 no longer has a pool.

24 And this involved the licensing of the
25 site-specific standalone ISFSI for Rancho Seco whose

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1 licensee is the Sacramento Municipal Utility District.

2 The acronym is SMUD.

3 We were faced with the issue of the fact
4 that they needed to decommission their pool and get out
5 of all the Part 50 tech specs for all the support systems
6 for the pool and get on with the job of finishing the
7 reactor decommissioning.

8 In the licensing discussions, we talked
9 about the idea of a dry storage system. And there were
10 a couple potential designs kind of at the view graph
11 stage that were out there, but nothing specific.

12 Those got pushed off the table fairly early
13 because of their expense and, at the time, their complete
14 uniqueness. There was no licensing precedence for
15 them.

16 And what we came up with was the notion of
17 the storage system which was the new homes horizontal
18 cask. The cask designer was some ways along in a dual
19 purpose transport canister.

20 And so, we incorporated that canister into
21 the licensing basis. And the principal reason was to
22 add defense-in-depth in case sometime way downstream
23 after the fuel had all been moved into dry storage, there
24 was a problem with a canister not necessarily defined,
25 perhaps a small leak, something like that.

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1 What resources would you have on site to
2 take immediate corrective action or prompt corrective
3 action? And the idea was we could have a transport
4 package that was certified, fabricated and tested to
5 show that its confinement met the requirements of Part
6 71 for normal and accident conditions.

7 And so, we incorporated that arrangement
8 into the licensing basis. It didn't solve
9 retrievability, but it solved the potential fiasco of
10 discovering a leaking canister at a storage site which
11 no longer had the capabilities of moving the fuel back
12 to the pool for remediation.

13 The one thing we talked about and never got
14 to was whether there needs to be a transport package
15 at every site. Should there be one that's maintained
16 by the vendor or a consortium of the utilities so that
17 one could be deployed?

18 And we never got to the end of that stream,
19 but that would be another option. Again, it won't solve
20 retrievability, but it could be something to help with
21 some kind of an event that causes you to want to repackage
22 or at least - I should reconfine with an additional
23 barrier.

24 FACILITATOR LESLIE: Thank you very much,
25 Charley. I've got one in the back, and then I'll come

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1 back over to this side.

2 (Discussion off the record.)

3 MS. DAVIS: Hi. Jennifer Davis. I'm a
4 storage project manager in spent fuel. And, Charley,
5 the information you were talking about, I think, has
6 a lot of bearing on the topic that I'll be covering after
7 lunch. So, I really appreciate your insights and I'll
8 look forward to hearing any further discussion on that
9 topic when we open it up this afternoon.

10 FACILITATOR LESLIE: Thanks, Jen.

11 MS. LEBLANG: Suzanne Leblang from Entergy.

12 And I wanted to start off with a couple of remarks that
13 first for the defense-in-depth, I think that we still
14 need the cladding inspections and/or research that we
15 are doing there, as well as the performance research
16 on the existing canisters.

17 And when we look at all this, we have an
18 unknown time frame here and that's a big unknown in this.

19 So, considering all those things if I look
20 at this strictly from a numbers perspective, do I want
21 to try and look and make sure that the cladding and the
22 retrievability of thousands of assemblies is possible
23 for a large number of different fuel types and different
24 variables, or should we look at hundreds, thousands of
25 canisters and that being something that we can inspect

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1 and look at and do some more performance studies on?

2 So, if I look at it strictly from a numbers
3 perspective, I think trying to clarify something for
4 a canister-based system may be easier than fuel
5 assembly.

6 FACILITATOR LESLIE: Thank you.

7 MR. McCULLUM: Rod McCullum still learning
8 to use the microphone.

9 I want to build on what Eric Benner said.

10 And I certainly emphasize - I would second his emphasis
11 that we do not want the NRC making National policy.

12 I think that is a key reason why we should
13 build the integrated safety requirements in Parts 71
14 and 72 on a canister retrievability, not an individual
15 assembly retrievability.

16 Because remember we have to meet - we being
17 industry or perhaps DOE on down the line as they make
18 policy on disposal and everything, we have to meet NRC
19 requirements, but there's no bar on exceeding NRC
20 requirements.

21 If NRC can assure safety with
22 canister-based retrievability, you know, Suzanne's
23 numbers argue with that, that makes sense doing that
24 for that number of canisters as opposed to trying to
25 figure out what's going on with a much larger number

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1 of assemblies.

2 If NRC at those first four steps of the
3 process can assure safety, can provide for safety,
4 provide requirements that assure safety at all four of
5 those steps with a canister-based retrievability,
6 someone who wants a higher standard of retrievability,
7 a reprocessing facility, might impose certainly a
8 contractual standard on any of its customers on what
9 gets sent there, you know, what do they know about their
10 cladding.

11 DOE might impose some sort of a requirement
12 that includes contracts with utilities or it might
13 impose design requirements on being able to handle -
14 or if it did choose - if DOE did make a policy decision
15 that it had to open everything at the repository, of
16 course we have an opportunity and NRC would have a future
17 opportunity to address that safety question through
18 whatever supercedes Part 63, the repository safety
19 regulation.

20 So, and that's an interesting point given
21 that the red arrow has no regulation under it whereas
22 the - which I think is appropriate right now because
23 there's no repository.

24 But, you know, when we're assuring safety
25 in Parts 71 and 72 if we can most effectively do it with

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1 a canister-based retrievability concept, that to me is
2 the essence of not making National policy.

3 Any national policies that would require
4 some higher standard, you know, we've got safety covered
5 those first four steps. Any National policy decisions
6 would impose other requirements through other means.

7 And those requirements would be oriented, you know,
8 not - they would be above and beyond what NRC does to
9 assure safety in the here and now.

10 FACILITATOR LESLIE: Thanks, Rod.

11 MR. GREEVES: John Greeves.

12 There's been a lot of discussion about
13 risk-informed, performance-based and I'll comment I've
14 seen very few really good risk-informed approaches.
15 People talk about it. It's very rarely done properly.

16 And something this discussion in this room
17 is sort of begging for, is what is the risk of operating
18 a facility without wet pool capability versus with wet
19 pool capability?

20 At each of these junctures here, I think
21 this dialog is begging for a risk analysis of what's
22 the difference? And I think there's probably a huge
23 difference between completely dry facilities with no
24 wet pool capability versus a wet pool capability.

25 So, I just offer that that's something that

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1 probably deserves some study.

2 FACILITATOR LESLIE: Thank you very much,
3 John.

4 I'm going to do one more here, and then I'm
5 - or two more. And then I'm going to go to the - oh,
6 go ahead, Mark.

7 MR. LOMBARD: I just have a question. Marc
8 has mentioned defense-in-depth a couple of times now.

9 To help inform our path forward, do you have
10 any feel for what that might entail?

11 MR. NICHOL: Well, the defense-in-depth
12 would look at both the canister confinement/containment
13 boundary and what cladding can also contribute to those
14 to the safety basis there.

15 I think that probably there's some
16 technical work that needs to be developed in that area.

17 MR. McCULLUM: Marc, if I could interject
18 because I'm more involved in the demo right now, it's
19 exactly what we're doing with this again trying to get
20 together with the Department on the used fuel
21 demonstration project.

22 If we can do those kind of projects and give
23 you information that helps support the integrity of the
24 cladding, that gives s feeling of margin, that gives
25 defense-in-depth. That's different than placing

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1 requirements that apply to each and every fuel assembly.

2 So, what it really means is doing it on a
3 demo basis or - a demonstrated basis as opposed to doing
4 it on a, you know, every assembly now has to be shown
5 to meet the standard by some test of reasonable
6 assurance.

7 So, you know, that's why I think placing
8 it in defense-in-depth category makes sense, because
9 it's how you - it's how you assure where it's different.

10 MR. LOMBARD: So, it's a defense-in-depth
11 based upon analysis or testing rather than taking some
12 additional actions, committing to additional actions
13 to prove defense-in-depth going forward.

14 MR. McCULLUM: To prove it on an individual
15 assembly basis, yes.

16 MR. LOMBARD: Okay.

17 MR. McCULLUM: You can generically assure
18 defense-in-depth, if you will, although we'll look at
19 a lot of different fuel types in that demo versus having,
20 you know, the risk of opening a canister to prove that
21 the cladding meets the retrievability requirement is
22 much greater than anything you gain by having the
23 requirement on that specific assembly.

24 MR. LOMBARD: Sure. Absolutely.

25 FACILITATOR LESLIE: Okay. Process-wise

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1 I'm going to take two more here in the room and then
2 I'm going to go to the phones, because I'm going to be
3 really loud and I don't want to disrupt the discussion
4 here.

5 And while the operator is working, I can
6 be really loud.

7 MR. WALDROP: Keith Waldrop with EPRI.

8 To Rod's comment, that was a good point
9 about making the - demonstrating safety within these
10 different elements of what's up on the slide.

11 And I think one of the things there is, NRC,
12 you've got a tall order here in what you're trying to
13 accomplish.

14 What you want to do is you want to try to
15 maintain flexibility within the regulations, but at the
16 same time, and I'm sure you're aware of this, you need
17 to be very careful not to enforce requirements in those
18 regulations that really should be up to the choice of
19 the licensee of how they go about doing things so long
20 as they're demonstrating the overall safety case.

21 And I think to speak to that as we talk about
22 71, 72 and the retrievability thing, I think the real
23 issue with how you define retrievability comes down to
24 the disposal aspect which we're shooting, you know, at
25 not a target at all yet. We don't know what we're looking

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1 at there.

2 So, yeah, we can wish for motherhood and
3 apple pie. But if we knew something of what we were
4 shooting for, then that might help us further define
5 what considerations we need to make for retrievability.

6 MR. HANSON: Brady Hanson from Pacific
7 Northwest National Lab.

8 And I want to first preface by saying even
9 though I'm with the DOE lab, I do not speak for the DOE.

10 I am not a federal employee, nor am I speaking for the
11 lab. But I am speaking as someone who spent almost two
12 decades working on the Yucca Mountain license and, you
13 know, have an idea of what goes into the disposal site.

14 I think Rod made a very cogent point a few
15 minutes ago when he said there's no regulation under
16 the red line up on Slide 7. And that's right, but, you
17 know, it's nice and easy right now to say, you know,
18 we'll look at risk-informed or we'll look at
19 defense-in-depth, but we're going to require it at this
20 level and hope for it at this other level. And I'm not
21 sure that that's going to work, you know.

22 It's true that the NRC should not make
23 policy. But when the NRC makes regulations that
24 whomever it is, whether it's the Department or a Fed
25 Corp or whomever has to meet in licensing a repository,

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1 those regulations dictate, you know, what we have to
2 meet.

3 And so, I caution this group about the law
4 of unintended consequences. And just as a very good
5 example, it's been brought up how the Department made
6 the move to go to the TAD.

7 Well, that was done for the sole purpose
8 of making sure that they wouldn't have to handle the
9 fuel.

10 The unintended consequence which, quite
11 frankly, worked out okay for the case of the Yucca
12 Mountain license, was we no longer had any idea what
13 the state of the cladding was inside that TAD. And NRC
14 did ask the question during the licensing process of
15 - actually, before the licensing process - sorry - of
16 prove to us how much of that cladding has failed.

17 We had no idea. And so, immediately it went
18 to, you know, the license application that was submitted
19 to the NRC does not take any cladding credit.

20 Like I say, that worked in Yucca Mountain,
21 it works with the current license, meets dose
22 requirements, et cetera. We don't know if that will
23 be true based on whatever the new repository might be.

24 And while it's nice, you know, I don't mean
25 to call you out, Rod, but while it's nice to say we can

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1 engineer our way around it, one of the, quote/unquote,
2 new paradigms we're stuck with is this Blue Ribbon
3 Commission that says thou shalt site it where the
4 community says, yay, we want it.

5 And if you go with that consent-based
6 process, we have no clue what that geology is going to
7 be. So, we don't know at this point what our reliance
8 on the source term is going to be.

9 And so if you move to retrievability at the
10 canister level while saying we want to and we fully
11 expect the cladding to be in place when you don't have
12 the rules to require it, it's hard to say exactly what
13 you're going to end up with.

14 FACILITATOR LESLIE: Thank you, Brady.

15 Julie, and I'll get back to Rod after we
16 break to the phones.

17 Any questions on the phone lines?

18 THE OPERATOR: Once again, please press
19 star-1 to ask a question.

20 (Pause in the proceedings.)

21 THE OPERATOR: I am showing no questions.

22 (Discussion off the record.)

23 FACILITATOR LESLIE: All right. Rod, do you
24 want to follow up or ask a question?

25 MR. McCULLUM: Yeah, I would, you know, and

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1 then with great respect for Dr. Hanson I feel like I
2 do need to respond because he did call me out.

3 (Laughter.)

4 MR. McCULLUM: I agree we do have a
5 difference of opinion. I think it is very instructive
6 that NRC did ask the cladding question and Yucca Mountain
7 did answer it. And they did go forward at Yucca Mountain
8 without cladding credit.

9 I think that was a wise decision. And I
10 wonder the SER that almost was, how it would have been
11 different and maybe not as - it might not have gotten
12 to the point it might have gotten to if they had tried
13 that approach.

14 But, you know, I think the one specific
15 thing that Brady said that I do want to respond to, it's
16 not just a hope that the cladding is okay.

17 I mean, again, in the dialog with Marc, you
18 know, we still would intend to do the things on the
19 defense-in-depth.

20 If DOE does evolve to a repository design
21 that requires more from the cladding than what Yucca
22 Mountain would have, and I would certainly hope they
23 would and I certainly, absolutely agree that NRC
24 shouldn't be making that call here in advance, that then
25 becomes a contractual issue between the industry and

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1 the Department, you know.

2 Our ability to send the fuel up to DOE, you
3 know, right now is the canister fuel thing the contractor
4 is still working on interpreting. That interpretation
5 would be further negotiated.

6 That requirement would take place after -
7 if I couldn't meet DOE's expectation for what I am
8 sending them if I am a utility, that's going to have
9 to be worked out. That should not be NRC's problem in
10 the here and now and assuring safety in those first four
11 steps, 72, 71, 72, 71, you know.

12 If NRC assures safety in those two parts
13 of the regulation in a harmonious way based on a
14 canistered approach, what happens, you know, in the
15 repository, you know, it's what happens in Vegas, stays
16 in Vegas, but what happens in the repository will happen
17 - and only in Vegas - in the repository process.

18 But to put NRC in a box where they now have
19 to anticipate any future repository requirement bet it
20 Yucca or some granite thing or something that the
21 community wants that's going to require four assembly
22 packages, you know, because of heat load, that puts us
23 in a real chicken-and-egg dilemma where we can't get
24 off square one.

25 Because that puts us waiting to do what we

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1 need to do to effectively assure safety in four things
2 that are happening or will happen soon, waiting for
3 something that might not happen for decades.

4 And that to us in industry who are working
5 very diligently to keep this stuff safe right here and
6 right now, that is unacceptable.

7 We cannot be held hostage to some future
8 repository questions. We've got to do what makes sense
9 to assure safety in storage and transportation as we
10 see it here today and let those chips fall where they
11 may.

12 FACILITATOR LESLIE: Mark.

13 MR. LOMBARD: I'm sensitive to your
14 comments, Rod. And being the new kid on the block and
15 not having been involved in any discussions or
16 negotiation with DOE on this point, it seems like there
17 should be a path forward that we can forge that would
18 help get to the end point sooner than having to wait
19 for a fund repository, but I'm just not sure how
20 successful that might be with so many questions out there
21 right now.

22 It does seem logical that we should be able
23 to get to that end point.

24 FACILITATOR LESLIE: Mike, you had -

25 MR. WATERS: I think one thing to take

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1 exception with Marc - with Rod, I'm sorry.

2 (Laughter.)

3 (Discussion off the record.)

4 MR. WATERS: I think your Slide 7 has a lot
5 of play here. And I think Eric mentioned it as well.

6 I mean, NRC is responsible for ensuring the
7 safety in environmental protection or understanding the
8 environmental impact for the whole fuel cycle.

9 Unfortunately right now - I say it's
10 unfortunate. Mike Waters' personal view is of course
11 industry owns the first part, and DOE owns the last part.

12 And they on paper, will both be our
13 licensees or our licensees will now be in the future.

14 So, I think it's a challenge NRC has and I don't think
15 I can rely on a contractual agreement between DOE and
16 industry to help solve a problem, you know. That's how
17 we got in this mess in the first place.

18 And I think that the fundamental challenge
19 is, is looking at holistically - as I mentioned, the
20 paradigm maybe has changed - generic transportation
21 regulations, because back when they were written, we
22 were talking about low burnup fuel and the idea that
23 fuel being for 20 to 40 years. And that was conceptually
24 easily to understand and get there and I think that's
25 the challenge here now. That's not the paradigm now.

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1 My final point is what is success? I talked
2 about continued safety. I think the fundamental
3 question here is continued safety in a discrete part,
4 or through the whole fuel cycle?

5 And I really believe the cladding integrity
6 reactor has always been the, you know, first line, first
7 fission product barrier.

8 If you look at all the environmental
9 studies, all the risk studies and all the security
10 studies cladding is taking credit for, I'm not seeing
11 it as a showstopper for change in studies, but that
12 having cladding has always been a fundamental
13 defense-in-depth in everything we do. And that's why
14 it's a challenging thing.

15 And I wholly agree with how do we do this
16 not knowing what the DOE standard will be down the road.

17 MR. McCULLUM: Yeah, I just want to say that
18 I agree with - and we've said from the outset we agree
19 with cladding as defense-in-depth in a canister-based
20 retrievability requirement. There are still things we
21 will do to demonstrate that defense-in-depth. And how
22 those translate into future repository requirements,
23 again that's the future. But, you know, we're assuring
24 safety right now on 1500 casks and will continue to do
25 so and want the best regulatory framework for that.

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1 FACILITATOR LESLIE: Well, comments or
2 questions here in the audience?

3 I'm going to turn to Bernie who has the list
4 of considerations that you had laid out. Is there
5 someone else? Okay, I'll come back to Brady, but,
6 Bernie, why don't you look at that list while this is
7 going on and ask yourself have you heard things on each
8 of those things that are sufficient for you to kind of
9 understand and bound your problems?

10 And then maybe that will generate some more
11 additional discussion. Brady.

12 MR. HANSON: Brady Hanson, PNNL.

13 I think what Mike said just triggered a
14 thought and maybe it's something that needs to be written
15 up there. And that is so as we're talking about
16 retrievability and the whole definition of degradation
17 in that, my understanding right now is per NRC definition
18 it says, you know, you should avoid gross degradation
19 in the fit of cladding. And "gross degradation" gets
20 defined later on as anything one millimeter breach or
21 bigger.

22 Potentially one of the avenues that the NRC
23 should be looking at with all stakeholders including
24 DOE is, is that a reasonable definition?

25 If, you know, because there's a difference

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1 between retrievability and cladding integrity for a
2 repository.

3 If in the safety aspect, you know, some fuel
4 can relocate and you're still not going to have
5 criticality issues or dispersibility issues, blah,
6 blah, blah, you know, maybe we can come up with a new
7 definition that helps everybody out.

8 FACILITATOR LESLIE: Thank you, Brady.

9 Marc, and I still needed to get back there.
10 So, perfect.

11 MR. NICHOL: I just want to further clarify
12 that. I believe the regulation that talks about
13 preventing gross cladding rupture continues to say, or
14 otherwise confined to fuel. And that could be defined
15 as confined within the canister, the storage canister
16 itself.

17 Historically, we've put those in individual
18 fuel cans and called that otherwise confining. So, I
19 just wanted to add that clarity to your point.

20 MR. WATERS: I want to jump in one more time.

21 Can you go back to the slide with the regulations that
22 Bernie listed?

23 And I want to base it on what Marc says -
24 the next one. Based on what Marc says and on what Brady
25 says, I mean, how far off are we really?

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1 I'll be honest. I believe the one on the
2 gross rupture, I think intent was not taking credit for
3 the canister was individually canning fuels that can
4 handle, although that's probably not said, I believe
5 that. I think the question back to the stakeholders
6 are, you know, we see these as part of the primary
7 regulations and I believe transportation is the more
8 challenging ones.

9 You can always make a safety basis probably
10 for storage and transportation, but do we need to change
11 the language in regulation here, do we need to change
12 our definitions, interpretation in the reg guides or
13 something else? Should we have more requirements on
14 maintaining cladding integrity as far as having a
15 temperature limit, but go to canister-based, for
16 example?

17 I'd like to hear ideas on that.

18 FACILITATOR LESLIE: Marc, go ahead.

19 MR. NICHOL: We've looked at the regulations
20 and we believe that there's potentially several options
21 in how to proceed if the paradigm were to be changed.

22 We don't believe changes to the regulations
23 are absolutely necessary to achieve it. Although, that
24 could be one avenue is to do it through rulemaking.

25 There is an open question of whether

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1 Commission policy would need to set that and I won't
2 provide our input here. I think the NRC is the best
3 determination of whether Commission policy needs to do
4 that, but it could be through guidance.

5 FACILITATOR LESLIE: Okay. And, Mike,
6 thanks for doing my job which was bringing a sharper
7 focus to getting your feedback which was going to the
8 question how should they consider it. And, Marc, thanks
9 for adding some comments on that.

10 Bernie, did you look at that list over there
11 and see if there's anything else you need further insight
12 on?

13 MR. WHITE: Well, I'd like to get a little
14 different approach.

15 FACILITATOR LESLIE: Okay.

16 MR. WHITE: One thing that really struck me
17 is the comments on something I didn't put on the slide.
18 Go back to Slide 7, I think it was. The fact that
19 there's no regulation for disposal.

20 The only reason I didn't put it there is
21 because we don't do disposal in SFST and I didn't want
22 to get into that whole issue.

23 I just wanted to keep disposal as a focus
24 in terms of where we are in terms of retrievability,
25 cladding integrity and that sort of thing.

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1 I guess what makes me stop and think,
2 because I've heard a lot of discussion about things that
3 are on my slides, and something that Bret said early
4 on is, is there anything that we've missed that you're
5 aware of. Is there a consideration out there that we've
6 missed in terms of what is on the slides?

7 And as Mike and Kristina talked about
8 earlier, you know, this is not going to be your only
9 opportunity to weigh in on this issue.

10 So, if you don't get, you know, if you think
11 of something tonight, you know, you're welcome to call
12 or email me. My contact information is there, but we'll
13 also be going out for a Federal Register Notice probably
14 sooner rather than later in terms of the time frame that
15 Kristina has been talking about in the January time
16 frame.

17 I probably shouldn't say this, but I will,
18 and Mike can do this if he needs to, but we've drafted
19 the Federal Register Notice already. It has a lot of
20 these considerations in it. And really it's a
21 questioning Federal Register Notice as opposed to here's
22 what we're going to do, because we still don't know what
23 we're going to do. We need input in terms of determining
24 what we're going to do.

25 And so, if there's something that isn't on

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1 the slides that should be that should be considered in
2 the Federal Register Notice, I'd like to hear that.

3 FACILITATOR LESLIE: Go ahead. Identify
4 yourself again.

5 MR. NICHOL: Marc Nichol from NEI again.

6 I just wanted to point out you have it up
7 on your board there, I didn't see it in slides, but I
8 did see it in the issue summary, and it's the topic of
9 concurrent storage and transportation certificates.

10 We believe that if there was this
11 canister-focused approach, that I think there would be
12 more incentive to elect to go to a concurrent storage
13 and transportation certificate because it would be
14 easier, but we wanted to say that we don't think that
15 should be mandatory. That it should be an option that
16 somebody could elect, but certainly it should not be
17 a requirement from the NRC. That would be our opinion
18 on that.

19 FACILITATOR LESLIE: Other comments or
20 questions? And even though Bernie says, well, I'm only
21 here representing the spent fuel storage and
22 transportation, he has support in the audience in terms
23 of any of the things that folks up here today you might
24 want to consider if you can add to that conversation.

25 MR. McCULLUM: This is Rod McCullum.

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1 I just wanted to make sure that we don't
2 lose focus on the fact that the Part 71 regulations right
3 now are written without retrievability presumably for
4 a reason. And I believe that reason is that the focus
5 can remain on safety particularly sub-criticality and
6 the operational flexibility to remove the contents in
7 whatever form they arrive in can be left to the users
8 and licensees and still contain the safety focus.

9 I believe there needs to be a bright line
10 between those two concepts so that we don't get into
11 tying the hands of the licensees unnecessarily.

12 MR. WHITE: Well, when you talk about
13 retrievability, you know, and I bring it up for
14 transportation, you know, I don't think of it in terms
15 of retrievability like we do in storage. I think of
16 it as can you pull out what you put in if it's going
17 down the road under normal conditions of transport, you
18 know? That's kind of my big picture thought process
19 when it comes to that.

20 The intent is not necessarily to tie
21 anybody's hands here. It's a matter of thinking about,
22 you know, compatibility is one of the things that we
23 brought up. But if you're going to have compatibility,
24 your regulations and policies should be compatible.
25 I use the word "compatible," not "identical."

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1 So, you know, while we may call it
2 retrievability and we're thinking retrievability
3 towards storage, it gives you a certain thought as to
4 what, you know, what we might be thinking not necessarily
5 - and I don't mean strict retrievability like it is in
6 Part 72 necessarily. It's just, you know, that's a term
7 we're familiar with.

8 We've brought the term safe handling, you
9 know. Kind of means the same thing, you know. Can you
10 safely pull out what you put in? Does it look similar,
11 you know?

12 So, you know, I don't want anybody sitting
13 here thinking that we're going to add retrievability
14 to transportation. We may, we may not. It may look
15 different. We're not at any point to say, you know,
16 one way or another at this point.

17 FACILITATOR LESLIE: Rod, did you have
18 another comment? And then I'm going to go to Jim
19 Rubenstone after you're done.

20 MR. McCULLUM: Yeah, I had a question. And
21 I had an answer to a question that you asked, and they're
22 kind of related.

23 The first question is I - Bernie just said
24 that you may be issuing the Federal Register Notice
25 earlier than January?

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1 MR. WHITE: Yes.

2 MR. McCULLUM: Because this affects
3 industry's planning as to how we want to provide input
4 to that, some things we might want to do ahead of that.

5 Do you have a revised time frame or a most
6 optimistic - what's the earliest we could see the Federal
7 Register Notice?

8 MR. WHITE: I'd say within two months.

9 MR. McCULLUM: Okay.

10 MR. WHITE: Now, I can say that, you know,
11 just because we issue a Federal Register Notice, doesn't
12 mean you can't provide the input then.

13 And once we go through the considerations,
14 if we go out for policy and the Commission says, yeah,
15 change the rules, you'll have a proposed rulemaking to
16 comment on.

17 So, there's plenty of opportunity.

18 MR. McCULLUM: Well, yeah. And that brings
19 me to the related answer to the question, is there
20 anything else we'd like you to ask about in the Federal
21 Register Notice?

22 And I understand the concept of the Federal
23 Register Notice. It poses a series of questions and
24 then looks for answers.

25 And a couple things I can think of were the

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1 topic of standardizing tech specs and COCs. And there's
2 plenty of material on what industry's intentions are.

3 And hopefully you'll see some of those intentions
4 manifest themselves between now and then, but plenty
5 of material on the record from the used fuel management
6 conference we held in May.

7 I think if you'd look at some of the
8 presentations industry made in that area and maybe ask
9 a question or two in the Federal Register Notice, hey,
10 industry had suggested, you know, that would give other
11 stakeholders - and we would appreciate hearing other
12 stakeholders weigh in on those. So, if you could ask
13 a question or two on the standardization issue.

14 Also, on the need for group guidance for
15 7248 implementation.

16 MR. WHITE: Yeah, let me back up a little
17 bit because the Federal Register Notice I'm talking
18 about is on retrievability and cladding integrity.

19 MR. McCULLUM: Oh, I thought we were looking
20 at one that was comprehensive on this whole -

21 MR. WHITE: Not yet. No, we're not there
22 yet. See, if you go back to Slide Number 3 - I think
23 it's Three real quick. I think you're getting ahead
24 of us a little bit.

25 MR. McCULLUM: I'm confusing two Federal

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1 Register Notices.

2 MR. WHITE: Not exactly. Not exactly.

3 MR. WATERS: Well, I mean, the idea is we
4 want to address all four issues to the Department to
5 process.

6 We see this cladding issue as a highest
7 priority because it is affecting realtime licensing
8 issues.

9 We want to separate - we have renewal
10 questions and transportation questions. We want to
11 separate out the true technical issues from policy
12 issues that may be under the old paradigm.

13 So, we want to get that tip of the spear
14 here, but among all four issues. That's why we were
15 talking about doing a circuit earlier rather than just
16 on the cladding issue.

17 Everything should have been done by the date
18 in January for all issues talked about today.

19 MR. McCULLUM: So, let me make sure I
20 understand. We're not talking about moving up the
21 entire January -

22 MR. WATERS: No, no.

23 MR. McCULLUM: We're talking about just
24 taking a portion of it out and moving that -

25 MR. WHITE: And the reason for that if you

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1 go back to the slides, you know, we had a public meeting
2 last year that said there's three technical issues we
3 needed to decide before we get to the compatibility
4 issue. The first one we're talking about is
5 retrievability.

6 So, we're going to go out and aks
7 retrievability issues, former policy, whatever that
8 turns out to be or maintain our policy, however we decide
9 to go.

10 Then we'll look at compatibility of Parts
11 71 and 72. And then probably have a whole nother series
12 of Federal Register Notices.

13 MR. McCULLUM: So, the two comments I just
14 made pertain to the January Federal Register Notice.

15 And I'll ask Brian and Marc, are there anything besides
16 standardization in 7248 that you'd also like to see
17 questioned in that notice?

18 FACILITATOR LESLIE: Make sure you're using
19 the -

20 MR. McCULLUM: If those two issues could be
21 addressed in the January notice, the question is asked
22 on those two issues, we would appreciate it.

23 FACILITATOR LESLIE: Thanks, Rod.

24 And one of the other things and I apologize
25 if I'm going to put John Goshen on the spot later, but

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1 I know he's talking about COC later. And I don't know
2 whether it will be relevant or not, but I've put it out
3 in the parking lot right now just for him to consider
4 as we go in the afternoon whether there's anything you
5 can add to the topic that Rod brought up.

6 And I think I'm going to turn it over to
7 Jim Rubenstone who originally said he had a question.

8 Do you still?

9 MR. RUBENSTONE: Yes. Jim Rubenstone, NRC
10 staff. I just wanted to close the loop on the comment
11 about the disposal regulations.

12 NRC has two regulations for disposal of
13 high-level waste and spent fuel in a geologic repository
14 in the books. 10 CFR Part 63 applies to disposal at
15 Yucca Mountain, Nevada specifically. And 10 CFR Part
16 60 applies to disposal in geologic repository in a
17 high-level waste in a general sense.

18 There has been discussion from the Blue
19 Ribbon Commission recommendations that revisions might
20 be in order for Part 60. This question was raised to
21 our commission during a briefing earlier this year on
22 some of the implications of the results of the Blue
23 Ribbon Commission recommendations. So, that's out
24 there on the table.

25 And I also had just a question for Rod and

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1 Marc. And I'm not sure who had brought this up first.

2 You had been speaking about use of the cladding as
3 defense-in-depth even if one were to go to a - in the
4 current terminology, a canister-based retrievability
5 system.

6 And I'm curious how the - what sort of
7 information or level of understanding of cladding
8 behavior, how that would differ between its role in
9 defense-in-depth in a canister-based approach as
10 opposed to the role of cladding in an assembly-based
11 approach if you could expand on that a bit.

12 MR. McCULLUM: Yeah, Jim, I can. And I do
13 want to recognize for the record that I shorthanded my
14 way through that no disposal regulation. I was aware
15 of 60 and 63. I just am not anticipating any repository
16 will ever apply to those regulations and that you will
17 have to come up with a new regulation for a new
18 repository.

19 But the answer really goes back to the
20 discussion I had with Marc earlier, which is that in
21 a canister-based system, you can rely on more prototypic
22 or demonstration data modeling.

23 If you are requiring retrievability on an
24 assembly-specific basis, that implies there's some
25 demonstration and each and every one of these 175,000

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1 assemblies meets that. And that is something, again,
2 if I have to open a canister to verify that my assembly
3 meets that standard.

4 So, it's really on how you're assuring as
5 opposed to what the expectation is.

6 MR. RUBENSTONE: Thanks, Rod. Just a
7 follow-up. I don't want to turn this into a debate and
8 too detailed about understanding the plan, but I don't
9 think there's any implication in the current regulations
10 that one needs to demonstrate based on inspection or
11 opening canisters, the integrity of every piece of
12 cladding out there.

13 So, I wouldn't want that to sound like
14 that's where we're being driven at this point.

15 MR. McCULLUM: Yeah, I appreciate that and
16 I think it's a subtle difference. But, you know, it's
17 a kind of be careful what road you go down thing. And
18 I think if we stay on the defense-in-depth road we can
19 agree much easier as to what's required.

20 FACILITATOR LESLIE: Rod, thanks for that
21 clarification.

22 Mark, go ahead.

23 MR. LOMBARD: Just a quick clarification of
24 the clarification.

25 (Laughter.)

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1 MR. LOMBARD: You know I don't think we would
2 rely on the inspection of, you know, broad inspection,
3 but there needs to be some, again, reasonable assurance
4 of a broad spectrum of data whether it's a demo project
5 or analysis or other research is done out there to make
6 sure that across the spectrum of cladding materials and
7 types of fuel, et cetera, et cetera and burnup, that
8 there would be reasonable assurance again that the
9 cladding would maintain its integrity whether it's fuel
10 assembly-based or canister-based.

11 MR. McCULLUM: We agree wholeheartedly with
12 that. And that's exactly the attitude we're going into
13 with DOE in trying to construct this demonstration
14 project and any subsequent ones.

15 FACILITATOR LESLIE: Thank you, Rod
16 McCullum, from NEI.

17 MR. WATERS: This is Marc Waters, NRC.

18 I think Brady and both Marc touched upon
19 that. The requirements aren't maintain pristine
20 cladding for eternity. And I think Marc said something
21 about, you know, maybe it's cracked, but it's still
22 intact.

23 I think Brett mentioned we change the
24 definition of that or, you know, what's the - I guess
25 what work is industry and DOE doing in that realm of

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1 -- we know how some fuel types appear to become more
2 brittle, for lack of a better word.

3 I mean that would be the right technical
4 term, but it becomes more brittle as it cools over long
5 periods of time. That's what the preliminary data shows
6 from the National Laboratory.

7 That doesn't mean it's going to fail under
8 storage or under the transportation stresses. We don't
9 know definitively what, you know, there's also
10 analytical and technical solutions, too, that's all
11 having to have a large debate over the policy and
12 certainly the regulation.

13 And I know it takes time and money, but I
14 guess the question is what is industry and DOE doing
15 in that road of understanding how it truly behaves over
16 the long term.

17 I personally believe we go to what we call
18 canister-based. I'm not sure if I like that term
19 either/or. I think that you have to look at both put
20 together. We'll still need some fundamental
21 understanding of how the fuel is expected to behave,
22 we do want to be risk informed, but that's another
23 question, what are we doing in that area.

24 MR. NICHOL: Marc Nichol from NEI. I'll
25 just give a small comment. I agree with you. Maybe

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1 I'll throw out a term canister-focused rather than
2 canister-based.

3 So, in a canister-focused approach, there
4 still is a need for research on cladding performance.

5 And that would be separate effects testing, it would
6 be analytical capabilities, the confirmatory
7 demonstration that Rob was mentioning earlier, but I
8 believe that it would not be as extensive. That you
9 would be able to reduce the burden of R&D on that.

10 Now, I'm not the right person to talk about
11 what R&D is going on. I'll defer to EPRI on that from
12 industry side, and Brady on DOE side.

13 MR. McCULLUM: And Rod Mccullum again.

14 In deferring to EPRI, perhaps Steve could
15 speak to this. I mean that's what what the whole SD
16 program is about, I believe, and I'll let EPRI talk to
17 that.

18 FACILITATOR LESLIE: So, now that your
19 colleagues have put you all on the spot, who wants to
20 go first? Brady.

21 MR. HANSON: So, what I can tell you is our
22 - Brady Hanson, PNNL. Sorry.

23 The plan that we're putting forward and
24 recommending to the Department to follow is to do exactly
25 as Marc said. We're doing the single effects test on

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1 cladding, continuing the work that NRC had done at
2 Argonne National Lab as well.

3 But one of the areas we're looking at is
4 something that we're calling our stress profiles gap
5 where basically what we're saying is we want to model
6 the degradation of materials. Not just cladding, but
7 fuel assembly, hardware and all that.

8 Over time, be able to plug that into a model
9 where you say, okay, if I'm going down the road in normal
10 transportation, what kind of forces are exerted to that
11 and do we expect them to stay intact.

12 If they don't, what kind of breakage might
13 we have? And, again, right now the Department focus
14 is, you know, kind of twofold on is it retrievable?
15 Because we are under the assumption at this point that
16 we will have to move to smaller waste packages based
17 on a non-Yucca Mountain type repository.

18 You know, if you go to anything that's not
19 a mined geologic rock with active ventilation, then the
20 heat load really does become even more important, but
21 the other aspect is also the cladding integrity.

22 And one of the areas that needs to be looked
23 at is, you know, again when I spoke earlier and I said,
24 you know, it worked for Yucca to get rid of cladding,
25 it's because - not to get too technical, but there's

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1 two different releases of materials possible in a
2 repository.

3 One is what we call the instant release
4 fraction. As soon as the cladding fails, you have
5 certain radionuclides that can come out right away.
6 The others can't come out until the actual fuel matrix
7 begins to dissolve and react.

8 In a reducing environment like most of what
9 the rest of the world is following, that instant release
10 fraction becomes the dominating one.

11 In Yucca, instant release happened, but it
12 was followed almost right away by the matrix
13 degradation. Which is why instant release didn't
14 matter. And I will say based on, you know, TSPA we were
15 within dose releases. For a new repository, that
16 instant release fraction could become the main thing,
17 but, again, looking at how much can we handle, how much
18 stress can we have.

19 And ultimately what the program is going
20 to recommend to DOE based on those results is, how long
21 do you have before transportation of fuel may lead to
22 degradation?

23 I do want to throw in one other thing since
24 everyone talks about risk-informed, you know. I'm all
25 for that, but let's, you know, for example, I heard

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1 someone mention, you know, the - one of the risks is
2 increased dose to the workers at the utility site if
3 you have to can fuel.

4 Fully understand that, but please take into
5 account when you're doing risk-informed if fuel does
6 fall apart and some poor worker at a hot cell facility
7 is having to repackage fuel, there is potential risk
8 to them as well.

9 So, always look at the big picture.

10 FACILITATOR LESLIE: Thanks, Brady.

11 MR. WALDROP: Keith Waldrop with EPRI.

12 I guess I'd like to start it off this way.

13 We wind up debating canister retrievability, fuel
14 retrievability here. And - or maybe canister-focused
15 as Mike said.

16 And I think the big thing there to take away
17 from this is, again, like it's been said, not that we
18 don't care about the cladding. And that's why the
19 biggest thing going forward, Rod alluded to it, there
20 is a workshop going on next week to get started in looking
21 at the high burnup demonstration project that is really
22 an extremely key factor of extreme importance to
23 industry as a whole.

24 You mentioned ongoing licensing efforts.

25 Yes, it's going to be needed for that as well. It

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1 provides a very strong driver. So, that is the main
2 emphasis right now of where we need to be going as far
3 as trying to continue to demonstrate the needs that we
4 need to on cladding.

5 FACILITATOR LESLIE: Thanks. Julie, I'm
6 going to go one more time to the phones before we start
7 to wrap up this session.

8 Are there any commenters or questions on
9 the line?

10 THE OPERATOR: Thank you. Once again,
11 please press star-1. One moment.

12 (Pause in the proceedings.)

13 THE OPERATOR: I am showing no questions,
14 sir.

15 FACILITATOR LESLIE: Thank you, Julie.

16 We're getting pretty close to the end of
17 when we're supposed to break. And what I wanted to do
18 is kind of look around the table and kind of walk through
19 some of the things that Bernie had laid out.

20 Some of the questions I had, I think we did
21 a pretty good job of hitting all the points and having
22 discussion on each of the considerations that Bernie
23 had laid out.

24 Appreciate folks identifying some of the
25 issues that NRC staff may need to consider. For

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1 instance, the standardization of tech specs and
2 Certificates of Compliance and NUREG-7248.

3 You know, I think this is a very useful
4 discussion this morning. There are some things that
5 were brought up that I think are going to be a familiar
6 flavor throughout the day. Some that are going to be
7 helpful as we go into the afternoon session.

8 I've identified some of them on the parking
9 lot hoping that Jennifer hears some more from Charley
10 on that example that he did of the Sacramento Municipal
11 Utility District.

12 And then also something for John Goshen
13 relative to something that we hadn't identified in this
14 presentation, and I'll look to Bernie to see if you're
15 feeling fairly comfortable about where we're at.

16 MR. WHITE: Yeah, thanks, Bret.

17 I just mentioned to Mike that a lot of
18 discussions that we heard here today are discussions
19 that we, the staff, have had internally. A lot of good
20 generic discussions about things going off.

21 And I use the words "generic," because we
22 use terms like "risk to worker," "dose to worker," which
23 while they're important terms, they're unquantified.

24 The parting shot I'd like to leave you with
25 to think about is that when we come out with the Federal

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1 Register Notice, we're going to be asking, you know,
2 for example, should we go to a canister-based
3 retrievability? And answer of "yes" really isn't going
4 to help us a whole heck of a lot. Okay?

5 While it might be a preferred answer, it's
6 not going to help us a lot in terms of defining it and
7 explaining why we should go that direction if that's
8 how we choose, to the Commission.

9 You know, Marc talked about the dose to
10 workers to can spent fuel at the reactor that may fail
11 in storage.

12 Brett talked about - and something that
13 we've discussed here as well, we haven't really
14 mentioned it today, but we discussed a lot within the
15 NRC is the risk and dose to workers if it's got to be
16 repackaged at a future facility. And that's why I had
17 those two bullets. When? Where? Whom?

18 If fuel has to be repackaged or canned, it's
19 dose, it's dollars. Here at the NRC, we do licensing
20 certification. I don't have a sense for what those
21 dollars and doses are. Okay?

22 If you in the audience do and you want to
23 reply to the Federal Register Notice, I'd love to hear
24 things along those lines. Because that would help
25 inform our decision from a technical basis, where we

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1 should go with our policy issues.

2 FACILITATOR LESLIE: Thank you, Bernie, for
3 trying to wrap it up and putting the burden back on the
4 audience.

5 (Laughter.)

6 FACILITATOR LESLIE: We'll give them
7 something to chew on over lunch. We're going to go ahead
8 and wrap up this session. It's about 11:30 now. Again,
9 kind of where we're at, we have an hour and 15 minutes
10 for lunch.

11 It's highly advisable to eat in the
12 building. If you want to go out of the building, you're
13 going to need to get an NRC escort. And I'll ask the
14 NRC staff to be available for escorts.

15 And we will start right at 12:45 this
16 afternoon, and thank you very much for your very
17 interesting and lively comments this morning. Thank
18 you.

19 (Whereupon, the proceedings went off the
20 record at 11:29 a.m. and went back on the record at 12:46
21 p.m.)

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A-F-T-E-R-N-O-O-N S-E-S-S-I-O-N

12:46 p.m.

1 FACILITATOR LESLIE: All right. Welcome
2 back. This is Bret Leslie, your facilitator for the
3 meeting. And I'm assuming everyone enjoyed their lunch,
4 and we'll get started here just in a second.
5

6
7 And I'll go through a few things before we
8 get started here in the afternoon. You know, NRC always
9 has this focus of safety first, and I wasn't a very good
10 facilitator. In case of an emergency, the emergency
11 exits are right out this door, down to your right, down
12 the hallway, and down the stairs. I don't -- I'm not
13 anticipating any fire drills today, but just in case,
14 that you know how to get out of here.

15 Mike, I think you wanted to say something
16 also about the Federal Register Notice, something about
17 the scope and clarify in the morning.

18 MR. WATERS: Yes, just one more time to be
19 as clear as possible, in response to Rod's question about
20 the Federal Register Notice.

21 Again, we want to go for safe water
22 feedback. The target is January, but given the priority
23 of the cladding issue and compatibility, we've talked
24 internally about going out with that first because
25 that's affecting current and future licensing actions

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1 and challenges. So, the goal was to get that out first,
2 and that may be the longest lead item of all these things
3 here, and probably influence everyone's, as well, so
4 our goal is to have everything done by January. Of
5 course, targets are going to be -- but our secondary
6 goal is to, if feasible, push ahead a lead enough for
7 just on the cladding issue that Bernie discussed this
8 morning. So, I wanted to clarify that.

9 I don't have an exact schedule other than
10 we're, as Bernie mentioned, we're far advanced on
11 writing that and will incorporate comments here into
12 that as, well. But I'm not going to commit to scheduling
13 this meeting until we talk about more internally, and
14 after we hear from everyone here, I'll be talking to
15 this group.

16 FACILITATOR LESLIE: Thanks, Mike. And kind
17 of checking in on the schedule, run through that really
18 quick and let you know where we're at. And then I've
19 got some feedback and I'm always looking for challenging
20 everyone in the audience.

21 I think we've done a great job so far of
22 listening and getting some issues out on the table, but
23 I'm going to challenge both the NRC staff and the
24 participants that don't hold anything back. In other
25 words, if there's something that you need more

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1 information, I mean, the whole purpose of this meeting
2 is to insure that the staff hears about issues now so
3 that the Federal Register Notice can be as responsive
4 to the things that the staff needs to be considering
5 as they go forward.

6 So, I know you guys can do that. I think
7 you did a pretty good job this morning, and I think a
8 couple of people think we could even be a little more
9 lively. So, with that in mind, we'll be getting into
10 this next first session after lunch with Jennifer Davis.
11 The topic will be regulating standalone independent
12 spent fuel storage installations. And I don't use the
13 acronym because I can't pronounce it right.

14 And then we're going to -- as part of kind
15 of the background information for that discussion, Brian
16 Rude is going to do a presentation right after that
17 trying to keep it to 10 minutes. And then we'll go into
18 the stakeholder feedback. And that session is scheduled
19 to end around 2:00, and we would immediately go into
20 the next session with Kris Banovac on applicability,
21 compatibility, and consistency of spent fuel storage
22 requirements and guidance.

23 After that, in terms of another stakeholder
24 feedback section, we will fill in a break. I will check
25 the audience after this first session to see where we

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1 are, after having lunch and sat through maybe, maybe
2 we're a little antsy and we might take a quick
3 five-minute break depending on where we are with the
4 discussion.

5 So, I guess with that, I know the phones
6 are back on line, and we still have the remote
7 participants. I'd like to turn it over to Jennifer Davis.

8 MS. DAVIS: Hi, everybody. As Bret said, my
9 name is Jennifer Davis. I'm the Senior Storage Project
10 Manager in the Licensing Branch of the Spent Fuel Storage
11 and Transportation Division. So, I'm going to talk about
12 regulating standalone, . ISFSIs, the Independent Spent
13 Fuel Storage Installations. And this something that it's
14 kind of been coming up a little bit for a while. It's
15 been prompted by some other issues, so we've got some
16 ideas. If you want to change the slide.

17 We've got some ideas, anyway, and then the
18 LPI turned out to be the perfect venue to maybe go ahead
19 and figure some of this stuff out. So, I think most of
20 you are probably familiar with our terms, but I'm going
21 to define them, paraphrase them real quick just for
22 completeness.

23 So, basically the Certificates of
24 Compliance certify spent fuel storage cask designs.
25 A specific license is for an ISFSI either at a reactor

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1 site or away from a reactor site, and that requires a
2 license application and licensing. A general license
3 is something that a Part 50 license holder can use, and
4 what they do is they can select one of the Certificate
5 of Compliance, COC designs that have already been
6 certified and use that in conjunction with the Part 50
7 licensing, infrastructure, and that sort of thing.

8 So, I want to point out for the purposes
9 of this discussion that the general license does depend
10 or does assume some Part 50 infrastructure associated
11 with reactor operation, like emergency planning,
12 quality control, radiation protection, et cetera. Next
13 slide, please.

14 So, what we're looking at is -- for my
15 terminology is we're going to call ISFSIs at shutdown
16 or decommissioned reactor sites standalone ISFSIs for
17 the purpose of this discussion. And there are 10 of these
18 at this point, either already at decommissioned sites
19 or sites that are in the process of being decommissioned.
20 Some of these do have site-specific licenses, others
21 are still operating under the general license. Next
22 slide, please.

23 So, in our current regulatory framework
24 what we want to look at is how does what we have now
25 apply to standalone ISFSIs? So, what we're looking at

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1 is we think that there may be some overlaps or
2 potentially inconsistencies, or things that apply to
3 say the general licenses while a reactor is operating
4 that might not apply to an ISFSI at a site once the
5 reactor has been decommissioned. So, we're just kind
6 of looking for can we make this better, can we make it
7 more efficient, more effective. You know, our efficient,
8 effective mantra, I guess.

9 So, we want to look at how does the
10 regulatory framework apply currently. Is it appropriate
11 for sites that no longer have operating reactor? And
12 then a related issue that falls under this umbrella is
13 what is the fuel handling capability at sites with a
14 decommissioned reactor and no spent fuel pool that do
15 have a ISFSI?

16 And then, also, finally it kinds of flows
17 is how do the Part 50 requirements relate? Are there
18 some rules that are not appropriate? We've been having
19 some recent, I believe, exemptions for foreign ownership
20 and control which is important for reactors. Is that
21 as important to ISFSIs? That's one of the things we
22 want to look at. Next slide, please.

23 So, here is our issue description in a
24 nutshell. We want to look at are there changes that we
25 might want to make to the regulatory framework, and by

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1 that I mean the regulations and the guidance, not just
2 the regulations. But the regulations that incorporate
3 potentially Part 72, and also Parts 50 and 20 to enhance
4 the consistency and completeness.

5 We also want to look at how are things
6 processed within NRC during decommissioning because
7 some of that's done in our Office of Nuclear Reactor
8 Regulation, some of that's done in our Division of Waste
9 Management in our Office of Federal-State Materials,
10 and I don't know what the E stands for, Environmental.
11 Oh, I should know that one. And then some of it comes
12 to us in the Spent Fuel Division. So, we want to look
13 at kind of regulatory framework, but also in how we apply
14 that regulatory framework.

15 So, here are our considerations. This, I
16 think, all kind of flows logically. You know, we want
17 to look at okay, what are the Part 72 requirements for
18 general license. What are the Part 72 requirements for
19 a site-specific license? How do they overlap, are there
20 gaps, are there things that we want to fix to make more
21 consistent, are there things we want to question, or
22 if all those are fine after our review, is there
23 something we want to change in our guidance or how we
24 apply those?

25 Similarly, we want to look at how the Part

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1 50 requirements align, particularly for the general
2 license, and how does the infrastructure that we assume
3 is associated with Part 50 reactor operations when ISFSI
4 is in place, how does that line up with what we're
5 assuming for a site-specific license?

6 So, we want to look at how does this all
7 work, how does it play together? Is it exactly the way
8 we want it, or do we maybe want to tweak it a little
9 bit?

10 And, again, the last bullet is what
11 requirements may not longer be applicable. Again, there
12 are several examples, one of which is the foreign
13 ownership and control. Is that something we need to
14 retain for a ISFSI added decommissioned reactor? Next
15 slide, please.

16 So, let's see. Now, we also want to look
17 at, as I mentioned, the cask unloading issue. Does the
18 current regulatory framework support maintaining cask
19 unloading for fuel handing at sites with ISFSIs but with
20 no spent fuel pool? And I think we heard a little bit
21 of this, some discussion on this morning, but it's part
22 of what we want to look at. And I think a view in our
23 discussion this morning is is it necessary? And that
24 may play out as our -- I think we're calling it our new
25 paradigm, plays out. It may be we may come to a different

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1 conclusion if we were operating under the Yucca Mountain
2 assumption. Then we may come to the conclusion given
3 some of the unknowns.

4 So, one of the things we do want to look
5 at it is at the actual sites with the ISFSIs at the
6 decommissioned reactors or otherwise standalone, what
7 plans do they have? You know, they may have plans already
8 for unloading or fuel handling in the event that they
9 need to, but we also expect that as things proceed one
10 of the areas might be aging management, looking at how
11 the fuel is holding up over time. Do we need to look
12 at it? That's going to require some unloading. So, do
13 we need to, do we want to? You know, is it appropriate?
14 Next slide, please.

15 And then, finally, we want to look also at
16 the Blue Ribbon Commission on America's Nuclear Future.
17 We want to look at their recommendations on the
18 standalone ISFSI, because this is one of the topics that
19 they have covered in their report. So, we want to look
20 at that and see if we might gain some insights either
21 from the report, or from some of the studies that I
22 understand they're starting to do on this fuel.

23 So, now these are just a handful of the
24 considerations that I most wanted people to think about
25 and give us feedback on today. There are some other

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1 considerations in the issue summary that's in your
2 package, that's also posted on the web, and that will
3 appear potentially in our Federal Register Notice in
4 January. So, if you want to address either the ones I
5 brought up here in this session, or if you want -- have
6 some comments on the considerations that were in the
7 issue summary but were not listed here, they just weren't
8 listed here for time, and I guess efficiency, if you
9 will. These were the ones I most wanted some feedback
10 on. So, next slide, please.

11 If you do have feedback after the meeting
12 or need to reach me, this is my contact information.
13 For those of you who don't already know me, there are
14 two Jennifer Davises at the NRC, so if you'll notice
15 my email address starts with B. So, she's very nice.
16 If you send the information to her and she doesn't know
17 what it's talking about she will generally forward it
18 to me. But if you want to reach me directly there's my
19 contact information. Thank you.

20 FACILITATOR LESLIE: Thanks, Jennifer. And
21 as Neil gets Brian's slides up -- found a dead spot in
22 the room. For those of you who have joined us this
23 afternoon, make sure you sign in the attendance form
24 here if you haven't during the break. And we'll begin
25 the discussion here after we go through Brian's

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1 presentation. And don't forget to identify who you are.

2 MR. RUDE: Well, thank you. I'm Brian Rude
3 from Dairyland Power Cooperative in LaCrosse,
4 Wisconsin, Vice President of External Member Relations,
5 and I'm also representing today the Decommissioning
6 Plant Coalition. With me is Bob Capstick, who's Director
7 of Regulatory Affairs for the Yankee Companies, much
8 more into the technical aspect. So the technical
9 questions can go to Bob.

10 MR. CAPSTICK: I'll do my best.

11 MR. RUDE: He'll do his best to answer them.
12 We appreciate the opportunity today to make some general
13 comments about the new paradigm, and from the
14 perspective of the decommissioned plants, an emphasis
15 that we would like to make on the need for some urgency
16 and some simplicity for our unique situation. Next
17 slide.

18 Dairyland Power Cooperative where I work
19 is certainly a unique institution as it relates to our
20 involvement in storage of spent fuel. We're a generation
21 and transmission cooperative located in LaCrosse,
22 Wisconsin. We're owned and operated by our members, and
23 we serve 25 distribution cooperatives in the four states
24 that we represent. You're going to have go through the
25 -- I have builds on the bullets so if you just want to

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1 do that.

2 We are the owner of the LaCrosse Boiling
3 Water Reactor, a 50 megawatt reactor built by the federal
4 government as a Phase II demonstration project for the
5 peaceful use of nuclear power. The balance of the plant
6 was built by Dairyland. We went critical in 1967,
7 commercial operation in 1969, purchased the plant from
8 the federal government for \$1, one of the wisest
9 investments we've ever made. And after successful
10 operation, the plant was closed in 1987 for economic
11 reasons.

12 Since 1987 we maintained 333 spent fuel
13 assemblies in wet pool storage. We've been operating
14 with about 25 employees, and our costs for this facility
15 have been about \$6 million a year. As a cooperative,
16 we're in a little bit different perspective than perhaps
17 some other organizations; 100 percent of these costs
18 are passed on directly to our members. Next slide.

19 Since 1987 we've worked on limited
20 dismantling resulting in 2 million pounds of material
21 having been removed including the reactor pressure
22 vessel, and our ISFSI construction is complete. And,
23 in fact, fuel is currently being moved there. Cask number
24 four of five is going to be moving either today or
25 tomorrow. Our ISFSI is located on site adjacent to an

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1 operating cold plant.

2 Our emphasis has always been on prompt
3 removal of spent fuel from Genoa. We were believers in
4 the federal government's promise under the Nuclear Waste
5 Policy Act. We were one of the companies that worked
6 to develop the private fuel storage project that
7 demonstrated success in gaining an NRC license.
8 Dairyland has always worked for the Yucca Mountain
9 legislation and plans, and regardless of what we talk
10 about today we agree that we need a final repository.

11 And in sync with the Blue Ribbon Commission,
12 our projects -- our community has never agreed to be
13 a place for long-term storage of spent fuel, so we worked
14 certainly with the Blue Ribbon Commission to try to
15 influence them and support their two key
16 recommendations; number one, the prompt development of
17 one or more consolidated storage facilities. And, number
18 two, that spent fuel and GTCC currently being stored
19 at our shutdown reactor site should be first in line
20 for transfer to consolidated interim storage.

21 We share this view with the Decommissioning
22 Plant Coalition. We're a charter member of the group
23 that was formed in 2000. We are comprised of the owners
24 of the permanently shutdown facilities, including Maine
25 Yankee, Connecticut Yankee, Yankee Rowe, LaCrosse,

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1 Rancho eco, and Big Rock, and our purpose has been to
2 work together to remove fuel from our sites, and to
3 address other issues.

4 Some of our activities, we've helped forge
5 a consensus that spent fuel and GTCC should be removed
6 to a consolidated interim storage site. And we've
7 engaged early and often with the Blue Ribbon Commission,
8 and we're active with many stakeholders. And we
9 participate here in the regulatory activities of the
10 NRC.

11 So, all that is background. Comments that
12 we would like to make today, NRC in shutdown plant
13 ISFSIs, our feeling is that current NRC spent fuel
14 management activities have been dominated by the Yucca
15 Mountain application impacts, and an assumption that
16 materials will remain on site for 100 to 300 years.

17 We see this in the Waste Confidence EIS
18 Draft Assumptions, research into long-term storage
19 issues, and renewed security examinations. We've been
20 looking to see if NRC considers the permanently shutdown
21 facilities as it begins new or revised initiatives. And,
22 again, consistent with the new paradigm it's a good thing
23 to raise today.

24 For the NRC, we see interest in improved
25 early consideration of our sites, but we haven't really

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1 seen progress in supporting the intent that waste
2 confidence decisions are not an endorsement of long-term
3 on-site storage.

4 For our sites we see increasing tendencies
5 to apply issues raised regarding the 100 to 300-year
6 period to regulatory tasks for the 20, to 40, to 60-year
7 period. What's missing is we feel that the Executive
8 Branch and some in Congress do appear ready to act on
9 the BRC recommendation for consolidated storage with
10 a priority for movement from our sites. And we very much
11 encourage the NRC to recognize this new assumption and
12 focus resources to ready it, the DOE and our sites for
13 removing material to a consolidated interim storage
14 site.

15 What is needed, we feel, is to commence the
16 planning of the integration of regulatory resources to
17 address current tasks and to plan for consolidated
18 interim storage and fuel removal. We need we feel to
19 begin the discussion potential shipping campaigns, and
20 the regulatory program must have a goal of avoiding
21 unintended consequences, of devoting resources to
22 reactor long-term research, and instead hopefully the
23 NRC could help set the stage for moving forward on this
24 new assumption.

25 A final thought, and this comes because I'm

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1 more of a political person on this issue than I have
2 been a regulatory person. We understand you're a
3 regulatory agency, and you're not a policy making
4 agency, but we also believe that NRC must be an advocate
5 for a sensible forward-looking national policy based
6 on safety practices and safety policy. It's part of your
7 charge.

8 NRC articulates the best practices from a
9 safety standpoint, and a security standpoint. And we
10 believe that movement of fuel from our shutdown reactors
11 to consolidated interim storage would be considered a
12 best practice from a safety and security standpoint.
13 And that we would like to see a movement towards stating
14 that as an expectation of progress as part of your goals.

15 We understand, again, the fact that you're
16 not a policy making agency but informing Congress and
17 the Administration about long-term goals and short-term
18 needs of handling of spent fuel, we think it would be
19 a good idea to have the NRC encourage the establishment
20 of a CIS program.

21 FACILITATOR LESLIE: Thank you, Brian. I
22 really appreciate it. And for folks who didn't
23 understand, when Kris Banovac set up this meeting we
24 offered the opportunity for anyone to make a 10-minute
25 presentation. Brian was the only one who was courageous

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1 enough to come up here and do that, so we put it in this
2 session. And, again, I'll do a few things just -- and
3 Jennifer also mentioned this, but here are some basic
4 picture kind of questions.

5 What else on Jennifer's list should NRC,
6 or what wasn't on Jennifer's list of the considerations?
7 And also not just in her slides, but in the issue
8 summaries that are available on the web remotely. And
9 for any of the items that she did talk about, how might
10 these things be done? And I think there's -- we really
11 -- NRC staff have told me this over lunch. They really
12 want the specifics. The more we can understand the
13 concerns and the specificity the more likely that the
14 Federal Register Notice that goes out captures the
15 concerns, or frames it in a way that gets even more
16 information.

17 You know, in terms of rule making, they're
18 not in rule making space, but one of the concerns that
19 stakeholders have had with NRC is posing the problem
20 appropriately up front. So, now kind of the burden is
21 on the stakeholders here to kind of help the NRC staff
22 understand and pose the problem statement.

23 So, with that I'm going to open it up to
24 the floor to see if anyone has comments. And then so
25 far only one. And kind of ground rules, again. Remember

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1 to identify yourself, and speak into the microphone.
2 And for Rod, the second ground rule is his lips have
3 to be less than an inch and a half away from the
4 microphone.

5 MR. GUTHERMAN: My name is Brian Gutherman
6 from Gutherman Technical. The segue was perfect, by the
7 way, because my question was going to be what is the
8 problem we're solving here, in particular, with the
9 shutdown ISFSI issue. This is new to me. I didn't know
10 that was being worked upon. But I think each of these
11 issues could benefit from a really clearly defined
12 problem statement that sets the stage for everything
13 else that is to follow.

14 I'm not quite clear what it is we're trying
15 to solve with that endeavor that is about to take place.

16 MS. DAVIS: Well, part of it is, and not the
17 whole problem. Part of it is, I believe it was in the
18 issue summary, is we did see some leaking casks at Peach
19 Bottom and Surry. Now, those were bolted casks and both
20 sides had spent fuel pools. So, part of what has prompted
21 this is our analyses and the site's analyses have shown
22 that there's no credible accident for welded canisters.
23 But if the fuel needed to be unloaded or examined for
24 any reason including, as I said, we're looking more and
25 more at aging management practices, or as we discussed

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1 this morning transportation, what do we do at those sites
2 with no pools, and is it not better to figure that out
3 now than when it becomes a pressing issue.

4 And then overall, too, we've just noticed
5 -- I think some of the staff and maybe stakeholders had
6 sort of assumed that when a reactor got decommissioned
7 that the general license for the ISFSI might transition
8 to a site-specific license. It seemed to us like that
9 might make sense, and if that assumption is not true,
10 then are there things that are more appropriate in
11 site-specific licenses for this kind of situation that
12 the general license might be, if this was not something
13 that was in the underlying assumptions for a general
14 license, that these sites might be decommissioned but
15 the ISFSI remains. So, we want to kind of look at the
16 background information and see if this kind of thing
17 was actually thought about initially.

18 And what we have seen is, certainly in the
19 Statement of Considerations for Part 72 when the general
20 license requirements were put in there, it said only
21 that when the fuel is removed from the site, the general
22 license goes away. It certainly does not say when the
23 reactor is decommissioned the general license goes away
24 and you do a site-specific license.

25 It's more a question of does this make

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1 sense? And we may find that it does. You know, does
2 everything we have in place already work? But we want
3 to just be sure, and can we make it better? And,
4 especially, I think we were already starting to look
5 at this before life as we know it changed.

6 I think it's even more appropriate in these
7 times when the fuel might be stored for longer periods.
8 Is that -- I know it's long-winded, but does that kind
9 of clarify?

10 MR. GUTHERMAN: Yes.

11 MS. DAVIS: Okay.

12 FACILITATOR LESLIE: Great.

13 MR. NICHOL: Marc Nichol from NEI. And I
14 appreciate that explanation because I had the same sort
15 of question as Brian. So, if I could try to summarize
16 in my own words what I might have just heard is that
17 there's kind of two aspects to this issue. And one, the
18 NRC is looking at the question -- it seems, and I get
19 most of it from Slide 7, that is the current regulatory
20 framework appropriate such that it could --- such that
21 unanticipated event could appropriately mitigated by
22 the place where the storage is occurring. And the second
23 one being, is it appropriate for decommissioned sites
24 to continue to use a general license.

25 I'd like to make a comment on the first

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1 issue, and then I'll let other people speak. But for
2 the first one, when we -- if we phrase the question as
3 -- and it seemed like what Charley made a comment about
4 earlier, is what type of capabilities are at the site
5 to be able to address any unanticipated challenges?

6 And I think if that's the phrasing of the
7 question, it's not really a matter of whether a pool
8 should continue to exist or not. That's just one
9 potential solution. And you referenced the bolted casks
10 having some leakage. Yes, they do have the action to
11 go back into the pool to investigate that. That's not
12 true for the welded systems. And the current approach
13 is that those welded systems are transportable.

14 So, from a perspective that could be the
15 answer that any unanticipated challenges would be
16 addressed through the transportability of that, put it
17 into a storage package, send it off to DOE. They
18 ultimately have the responsibility for this used fuel.
19 So, from that perspective the solutions could be
20 different for different sites, not necessarily a pool
21 or no pool.

22 MS. DAVIS: And what I meant to mention, as
23 well, in response to Brian's question, one of the other
24 things that prompted us looking at this issue as a whole
25 was we have a petition from C-10 which is a public

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1 interest group near Seabrook, and one of their requests
2 for rule making included requiring a hot cell transfer
3 facility at this type of -- at the standalone ISFSIs.
4 So, that's kind of prompted the thinking, too. But let
5 me just say this, is that another option, if you will?
6 And there may be more.

7 MR. NICHOL: Yes, Marc Nichol, again. I would
8 agree that that might be an option to address some higher
9 level consideration rather than prescribing that a hot
10 cell facility needs to be there. Perhaps just being able
11 to address some unforeseen event, and that could be
12 through transportability of the canister, or it could
13 be through some other means.

14 MR. WATERS: Can I ask a very specific
15 question?

16 FACILITATOR LESLIE: Sure, absolutely.

17 MR. WATERS: Actually, a question.
18 Transferability of a canister, that's something we've
19 been thinking about. And maybe it's more directed to
20 the Decommission Coalition. Is there a -- when you
21 decommission do you have a policy of assuring the
22 canister is transportable before removing the spent fuel
23 pool? Because one issue this morning was, you know,
24 industry is in a position in some sites, what we do on
25 the res, we seal the fuel and canister is not yet

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1 technically certified for transportation.

2 MR. CAPSTICK: As I mentioned --

3 FACILITATOR LESLIE: Make sure you identify
4 yourself.

5 MR. CAPSTICK: Bob Capstick from the 3 Yankee
6 Companies. There are no regulatory requirements under
7 Part 50 or 72 to maintain fuel handling or cask unloading
8 capabilities, or for that matter that the fuel be stored
9 in a transportable canister. That was a decision that
10 was made with the vendor and the systems that were
11 available at the time. And it just seemed to make sense.

12 Plus, as Marc has mentioned, having the
13 transport cask available in kind of an emergency
14 situation or whatever for future transportability, it
15 afforded some options that were very positive. But no,
16 there was no consideration given.

17 Basically, you know, to go back to the old
18 paradigm, we used to ship routinely, and then that was
19 stopped because there was no longer a processing. So,
20 then we had to go to extended storage in the fuel pools
21 really. And then once you decommission, the only way
22 you can take your plant apart is to move that fuel out
23 of the fuel pool into dry cask storage. That was the
24 option chosen.

25 It was done under the regulations and, in

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1 fact, it's been endorsed by a number of court decisions
2 as the prudent thing to have done. But once that's done,
3 once that's completed, and once you remove your fuel,
4 decommission your plant, restored your site, your
5 infrastructure goes away, and there really isn't much
6 of any kind of support at the site. There's a lot of
7 security people, but -- and then to kind of come to the
8 point about the Part 50 versus the Part 72 license issue.

9 Under the current regulatory framework when
10 we shut down, we went with the general license under
11 Part 50, and that made sense, and it continues to make
12 sense for our companies to maintain that. It would be
13 very costly, time consuming, and an awful lot of other
14 things to go through a relicensing of Part 72.

15 Now, while the current regulatory framework
16 is perhaps challenging, it is something that has worked
17 in the past. Now, we've had some recent challenges with
18 respect to security exemptions, emergency
19 planning-related exemptions. And in the final analysis
20 it really should be a question, not so much a question
21 of why Part 50s or Part 72s are treated differently.

22 The underlying regulatory basis should be
23 not what type of license you have, but rather based on
24 a risk-informed approach, depending on what kind of a
25 facility it is, and what the site-specific risks are.

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1 The need for the numerous exemptions from
2 Part 50 requirements is really kind of underscored, so
3 while it's perhaps a challenging process for you and
4 for us, it's one that does work, but perhaps could be
5 made more efficient.

6 And I think one of the ways that that might
7 be addressed is if we earlier on in the process, as
8 Jennifer is suggesting, address the applicability of
9 these regulations and regulatory changes early on, not
10 waiting until we get too far down in the process. And
11 to do that, less so on a licensee, or a license-type
12 basis, but more on a site-specific risk based,
13 risk-related consideration basis.

14 MS. DAVIS: I'd like to say, though, I don't
15 know that I want to speak for the staff as a whole, but
16 I think there are requirements in Part 72 at least for
17 unloading, and certainly in the technical
18 specifications there should be. I don't know what system
19 you all are using, but it's something that I would like
20 to explore with you further to maybe see what you've
21 looked at, and also check myself to make sure -- that's
22 definitely something that would have a lot of impact
23 on where we're going with this issue.

24 MR. CAPSTICK: Just another point, you know,
25 when we went through this process early on, we put -- our

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1 systems are in international sealed canisters. There's
2 no credible security-related or emergency-related
3 scenario that results in an offsite release. That's why
4 we don't have an offsite emergency plan.

5 So, given that, I'm not sure I can come up
6 with a scenario under which we would have to confront
7 a situation where we would try to open those canisters
8 on the site.

9 FACILITATOR LESLIE: Okay, thank you.

10 MS. DAVIS: I'm sorry. Again, we are pretty
11 early in the process, so we are trying to explore what
12 the needs are, as well as what would be reasonable.

13 FACILITATOR LESLIE: Okay, I'm going to --

14 MR. NICHOL: I wanted to add more detail to
15 Mike's question.

16 FACILITATOR LESLIE: Okay, sure. Marc, Rod,
17 and then EPRI guy. I forgot his name.

18 MR. NICHOL: Okay. Marc Nichol from NEI. So
19 just to be clear, so to my knowledge all of the shutdown
20 ISFSIs have welded canisters that are transportable.
21 That's been industry strategy. It will continue to be
22 industry strategy for the standalone plants, is that
23 they're transportable.

24 Now, the fact that the current ones are
25 welded, they don't have the concern of losing the

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1 confinement boundary, and that's why there's no
2 confinement monitoring to them, as well. That's a
3 different situation than perhaps a bolted cask.

4 And, Jennifer, what you may have been
5 alluding to, I believe, is the contingency for the bolted
6 cask to be able -- if a seal fails to be able to take
7 it back into -- take it back in and replace the seal,
8 even unload it if it were absolutely necessary.

9 So, what I think industry strategy would
10 be if a plant were to decommission with bolted casks
11 is - and it would be required by their license to maintain
12 the ability to replace those seals.

13 Now, the solution to that could be very
14 different for each utility, some may retain their full
15 pool, some may build a small pool that you could put
16 the cask in, others may have a dry transfer facility,
17 or a dry facility to be able to do that. But in any case
18 for the bolted cask they would have to maintain that
19 capability, as well.

20 FACILITATOR LESLIE: Thank you, Marc. Rod?

21 MR. McCULLUM: Yes, I have two completely
22 unrelated questions that both occur one-inch from the
23 microphone. Rod McCullum, again.

24 I heard, Jennifer, you mentioned the C-10
25 position. It's been a while since I heard anything about

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1 that. I'm not even -- I don't even believe NRC formally
2 responded to that.

3 MS. DAVIS: It's still in processing. We've
4 actually -- it's got 12 different issues for rule
5 making, so we've been carefully deliberating how best
6 to respond. I don't know, Bernie, if you have any further
7 information? I think that's -- we're working on it.

8 MR. WHITE: Yes, we're still on the -- I'm
9 sorry, Bernie White, SFST. I'm the Project Manager
10 that's been assigned to the C-10 petition recently.
11 We're still in the process of responding to that
12 petition.

13 MR. McCULLUM: Do you actually intend to
14 respond to that petition?

15 MR. WHITE: Absolutely. We respond to all
16 petitions for rule making that are formally accepted
17 by the NRC.

18 MR. McCULLUM: Is there a time table for when
19 you might respond to that petition?

20 MR. WHITE: That's a good question. I don't
21 believe we have a formal time table. My personal
22 opinion is I'm hoping by the end of the year, but that's
23 my personal opinion, not the Agency position.

24 MR. McCULLUM: Continuing that line of
25 questioning, have any of the recent developments in this

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1 area -- we've had three court decisions. Have those
2 impacted your thinking on the petition at all?

3 MR. WHITE: No, they have not.

4 MR. McCULLUM: And a completely separate
5 question. You know, you're looking at regulatory
6 requirements, potential regulatory requirements that
7 require some fuel handling capability, and shutdown
8 ISFSIs. Have you thought about what a backfit analysis
9 for that sort of thing might look like, and what that
10 might show?

11 MS. DAVIS: Well, I think we have to have
12 a going forward kind of position before we looked at
13 backfit. But certainly if we do recommend any changes
14 to the regulations, we would definitely do a backfit.

15 MR. McCULLUM: Yes, because I would be
16 -- given what Marc Nichol has indicated about those
17 casks and the transportability, and the nature of those
18 casks, it would be hard for me to imagine showing a cost
19 benefit that would be reasonable if any such requirement
20 were to be imposed on existing standalone ISFSI.

21 MS. DAVIS: I think we do have to call it
22 something different, though, because I think backfit
23 is only Part 50.

24 (Off microphone comment.)

25 MS. DAVIS: No? Apparently, I don't have the

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1 regulation memorized.

2 MR. WATERS: Different backfit analysis.
3 This is Mike Waters. I mean, one thing I want to chime
4 into is actually what Brian said, what problem are we
5 trying to solve? And I think that's a good comment we
6 need to focus on better to finding that out.

7 And this one, I don't want to -- I won't
8 mince words, not problem we're trying to solve, but with
9 the change of paradigm what are the potential problems
10 we want to prevent as a regulator going forward for
11 standalone ISFSIs I think is a better way to look at
12 it.

13 On both sides that are issues of unloading
14 capabilities, as well as the issues that went into with
15 the applicability of Part 50 to decommission the site.
16 I can provide comments on a lot of resources on reviewing
17 exemptions for regulations that do apply to these
18 ISFSIs, but from a safety standpoint maybe should not
19 have. But that's the reality of the regulation.

20 So, looking at both sides, aging management
21 is another thing, what you're going to prevent. Now,
22 I think Marc is right, for example, canisters may be
23 less vulnerable than sealed canisters, than bolted
24 canisters. I'm not -- bolted casks. I'm not saying that,
25 but at some point maybe you have to perform aging

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1 management activities on the canisters, for example.

2 And what does that mean for standalone ISFSIs?

3 There's a whole laundry list of issues of
4 what we want to prevent from a safety and an
5 administrative standpoint, as well as to kind of define
6 the problem for Brian.

7 MR. CAPSTICK: Well, not to make your life
8 any more challenging, but the reality is it's the vendors
9 that hold the C of Cs, not the utilities.

10 MR. WATERS: Right. And is that the right
11 paradigm going forward? And that's the --

12 MR. CAPSTICK: That's the reality we're
13 dealing with right now.

14 FACILITATOR LESLIE: Okay. I'm going to pass
15 the mike.

16 MR. WALDROP: Keith Waldrop with EPRI. This
17 is more of a former licensee comment than an EPRI
18 comment, just elaborating on what Marc said. And, Mike,
19 this really doesn't address what is the problem we're
20 trying to solve in going forward, but helping to clarify
21 where we are now; and that is, yes, for bolted casks
22 there's a tech spec required action that you have to
23 have the ability to go in. And if you have a leak, take
24 it and unload it, and look at it. And for the welded
25 canisters there is no such tech spec action that would

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1 require you to do that. So, I guess that's the issue.

2 MS. LEBLANG: Suzanne Leblang from Entergy.
3 Some licenses do have that requirement.

4 MR. WALDROP: But to further elaborate, the
5 --- while there are some systems that do not require
6 it, that doesn't mean that they can't be able of
7 handling it in some way that they deem appropriate.
8 Similar to -- if some accident were to -- well, for
9 example, a cask tip over, you're required to analyze
10 for it and show that it can't happen, but yet let's say
11 if could happen, but you don't have procedures and
12 everything in place to handle that. That would be a
13 response to an action that you would take.

14 Similar to a welded canister system, if it
15 were to develop a leak or something you had to respond
16 to, you don't have a tech spec telling you to do that.
17 You then have to figure it out at that point and respond
18 to it.

19 MS. DAVIS: All right. If I can add to -- one
20 of the things we are going to be looking at is what was
21 in the existing tech specs across the systems and type
22 of canisters.

23 I also want to point out, although it
24 doesn't directly relate to this, we did have the
25 beyond-design-basis event at the North Anna ISFSI, so

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1 it's not the same type of event that maybe might impact
2 some of the standalones, but there are things that happen
3 unforeseeable, so I guess part of what I'm looking at
4 is, you know, let's figure it out now instead of when
5 it's urgent. But a lot of the things you're raising are
6 things we want to look at as part of this issue.

7 And I also want to ask, we have been talking
8 a lot about the cask unloading part of this issue, but
9 if people have comments or other considerations on the
10 general license, site-specific license, Part 72, Part
11 50 considerations that would be helpful, as well.

12 FACILITATOR LESLIE: So, other comments,
13 questions here? I'll give people a chance to catch their
14 breath. And, Julie, can I check on the phone to see if
15 there are any questions at this point on this topic?

16 OPERATOR: Once again, to ask a question
17 please press *1. One moment. At this time there are no
18 questions.

19 FACILITATOR LESLIE: Thank you, Julie. I'm
20 going to take Marc, and then I'm going to go over to
21 Jim Rubenstone.

22 MR. NICHOL: Okay. Marc Nichol, NEI, again.
23 And I had a question. Jennifer, your last comment made
24 me think about something, before we get to this 50/72
25 question.

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1 But going back, and you talked about
2 unloading the casks, and it got me to think to the last
3 conversation we just had. When we look at or think about
4 unloading casks, it would be for fuel issues or cask
5 internal issues. And we had great discussion about the
6 rule of retrievability, this cask-focused versus
7 fuel-focused. If the NRC were to move to this
8 cask-focused type of paradigm, then there wouldn't be
9 a need to unload these casks. And the greatest challenge
10 to these casks would be the canister confinement
11 boundary. And we talked about earlier how to mitigate
12 that, in an extreme be to put them inside a new envelope.

13 I mean, it could be much more simple than
14 that by applying a coating or doing some other
15 surface-type of repairs. So, I would encourage the NRC
16 to link these two concepts together and see how the
17 previous discussion could be a solution to what we're
18 discussing here.

19 FACILITATOR LESLIE: That's great, Marc. And
20 one of the things we'll do at the wrap-up session is
21 kind of look across all of the issues and see whether
22 we can add some more meat to the bones. Anyway, Jim?

23 MR. RUBENSTONE: The discussion so far in
24 this area has focused on dry storage at these independent
25 ISFSIs. There are some plants that have moved into

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1 decommissioning and maintained wet storage for their
2 fuel. That's perfectly allowable under the current
3 regulations. Is this something that NEI or the industry
4 sees as a continuing trend, and are there any technical
5 issues that may need to be addressed if that continues
6 in the future?

7 FACILITATOR LESLIE: Before NEI answers that
8 was Jim Rubenstone of NRC staff.

9 MR. RUBENSTONE: Oh, sorry.

10 FACILITATOR LESLIE: No problem. Rod?

11 MR. McCULLUM: Jim, we're not aware of any
12 trend in that regard. I mean, Zion maintained a pool
13 for quite some time, and now they're going to dry
14 storage. I would see the question of what pace they would
15 move to dry storage, but I don't see long-term -- I don't
16 see extended wet storage as being something industry
17 is actively thinking about pursuing right now.

18 FACILITATOR LESLIE: Thank you, Rod. Other
19 questions or comments right now? Marc?

20 MR. NICHOL: Marc Nichol, NEI, again. I guess
21 if that topic was discussed, I'll introduce the 50/72
22 aspect. And I think the NRC's perhaps phrasing of the
23 question is, is it appropriate for a general licensee
24 to maintain general license if they become a standalone
25 ISFSI that's decommissioned. And industry would

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1 advocate that yes, it is still appropriate to maintain
2 that general license. And safety is still being insured.
3 Whether they're site-specific, or whether they continue
4 their license, they're still maintaining safety to the
5 NRC's standards. And from that perspective, there would
6 be no safety argument to force somebody to -- to force
7 a standalone ISFSI to switch over to a Part 72. Although,
8 you would have to consider that there are substantial
9 burdens to do so, and perhaps a lot of them are in the
10 administrative area, but there may be other burdens,
11 as well. And I'll let the decommissioned plants
12 elaborate on what they might be.

13 However, if continuing with the general
14 license as a standalone ISFSI, there may be some
15 requirements that could be streamlined a little bit.
16 And I think we see those in some of the recent exemptions
17 that have been granted along the lines of security, or
18 environmental protection. So, a generic way to grant
19 those types of exemptions or reduce the burdens of those
20 Part 50 programs with respect to them might be
21 appropriate.

22 And I'll pause there. I have more to say,
23 but maybe I'll turn it over to the decommission folks
24 to provide more --

25 MS. DAVIS: Let me add really quick before

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1 you go on. We are not saying anything is not safe, so
2 I just want to make that clear. If we were, we would
3 be in a whole different kind of venue.

4 MR. NICHOL: Okay.

5 FACILITATOR LESLIE: And I guess -- so, I'll
6 look to the Decommissioning Plant Coalition for
7 something. But I want to come back, if it's not
8 -- because there's a germ there that I want to pursue,
9 as well.

10 MR. CAPSTICK: I'll just respond for the 3
11 Yankee Companies. Each one -- and somewhat unlike
12 Brian's situation at Dairyland, these companies were
13 formed solely to own and operate those single nuclear
14 power stations. That's all those companies were formed
15 to do, and but for the federal government's failure to
16 meet its obligation to remove the fuel, I wouldn't be
17 here. We'd be out of business, so that's our business
18 plan.

19 (Laughter.)

20 MR. CAPSTICK: Seriously, that's our
21 reality. So, we're not in any other business. We don't
22 generate any other kinds of electricity, and that's what
23 we do. And I think that's true of some of the other
24 decommissioned plant sites.

25 FACILITATOR LESLIE: So, let me ask a kind

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1 of a leading question to help the staff understand. For
2 those two actions where you had to take the exemptions,
3 these were new regulatory requirements that were dealt
4 with in a rule making process, and the consideration
5 of the decommissioned plants was not part of that
6 consideration, or did -- you know, did NRC not make you
7 aware that this might happen to you?

8 MR. CAPSTICK: I think in each instance
9 there's a specific story, so there's perhaps not one
10 single answer to that question. I think going forward
11 perhaps -- and what we're considering doing and trying
12 to do is to address regulatory issues sooner rather than
13 later. As NUREGs come out, INPO notices, rule makings,
14 put our issues up on the table and give our opinion as
15 to whether we think they apply or they don't apply. And
16 as these issues go through the process, there may be
17 a way to more efficiently address them, rather than going
18 through the process, getting to the end and then you
19 say does this apply to us? And that could be a challenging
20 situation, so I know it's not a direct answer to your
21 question.

22 MR. RUDE: I would just add a couple of
23 things. First of all, as I've had some conversations
24 today I think, generally, we've done very well working
25 with the NRC on the specific exemptions unique for a

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1 site. So, we're not -- it's not a gripe session. It's
2 talking about moving forward and how we move to that
3 new paradigm.

4 But one of the critical issues for us
5 always, not only is the uniqueness of our site, but the
6 fact that we are not generating revenue from the site.
7 And that is an ongoing challenge because in our case,
8 in particular, since we're a co-op, just results in a
9 direct rate increase to our members. So, our members
10 expect us to justify the value that we're receiving for
11 those expenditures. And I think that makes it -- some
12 tension there, as well.

13 FACILITATOR LESLIE: Okay. Comments or
14 questions?

15 MR. GUTHERMAN: This is Brian Gutherman,
16 again. I just wanted to offer, there might be a piece
17 of licensing precedent out there that would be helpful.
18 I believe Trojan did a license amendment for their
19 specific license to remove all the unloading
20 requirements for their casks. It might work well with
21 SER; understanding, of course, the time frame within
22 which that SER was written was different than now.

23 MS. DAVIS: Right, but it would be
24 informative.

25 MR. GUTHERMAN: I just wanted to point that

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1 out.

2 MS. DAVIS: Yes.

3 MR. GUTHERMAN: Sorry?

4 MS. DAVIS: It might be worth looking at just
5 for the information.

6 MR. GUTHERMAN: Yes, get whatever the logic
7 of the staff was at the time.

8 MS. DAVIS: Exactly. Thank you.

9 MR. WATERS: This is Mike. I think, and this
10 is one of the challenges that I wanted to try to give
11 our perspective of, is when we get a site-specific
12 license a decommissioned site, we get a license
13 application from licensing, we can look at the facility,
14 the infrastructure, and ask all these questions. And
15 it's much easier, not easier but we ask these questions,
16 the what ifs, and you know, this case, and set precedent
17 when we have a site-specific application.

18 See, the case here is, for example, Yankees
19 use a cask that's certified, and we ask the vendor
20 questions, and it's based on the generic principle that
21 the cask, canister can be used anywhere. And whether
22 it was right or wrong, I believe the general license
23 was premised on the fact that it would be an operating
24 power reactor at the time it was written. And I agree
25 with Bob, there's no glaring safety issue, and if it

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1 works, it works. But going down the road that
2 administratively, some of these Part 50 requirements
3 and the fact we'll have more decommissioned sites with
4 no repository in sight until something changes. That's
5 the way we're looking at it. MR. CAPSTICK: And
6 this is Bob Capstick, the Yankees.

7 FACILITATOR LESLIE: Hold on a second.

8 MR. CAPSTICK: Again, just to follow-up on
9 Brian's point. You know, all of our expenditures go
10 through the PERC banking process as well, so unless
11 there's a compelling safety or other type of
12 requirement, and right now there is no safety benefit,
13 but substantial effort and cost to go forward with
14 changing over to a site-specific Part 72.

15 FACILITATOR LESLIE: Okay. I'll remind folks
16 to identify yourself before you speak. I've got a couple
17 of questions in the back, and then I'll come back up
18 to the table, or comments, I should say.

19 MS. LEBLANG: Yes, I have a -- Suzanne
20 Leblang from Entergy. And I have a comment. You can also
21 look at the Big Rock Point application that is similar
22 to the Trojan, that it no longer has an unloading
23 scenario in it.

24 And, Jennifer, one question/comment that
25 I had is, you made reference a couple of times to the

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1 aging management programs for these. Is there a
2 consideration of having different aging management
3 requirements for the shutdown ISFSIs?

4 MS. DAVIS: No, not that I know of. I'm just
5 thinking about, you know, in terms of when the current
6 update, the most recent or rule change to Part 72 came
7 out, I think it was before or during all this change.
8 So, it's one of the things I don't know if that might
9 change also under the new paradigm.

10 We have nothing at all in progress. There's
11 no rumors. It just seems like something that might -- a
12 reasonable assumption that might occur, but there's no
13 reason to be anxious at this point in time.

14 (Laughter.)

15 MR. WATERS: But I do want to add, though,
16 when the vendors come in for the renewals, which is later
17 on, if there are aging management surveillance or
18 monitoring requirements that are established either by
19 -- based on their analysis or by NRC's requirement, the
20 decommissioned sites will have to live to those
21 surveillance and inspection requirements. So, again,
22 the question is, is infrastructure there?

23 I think anyone can argue that at a power
24 reactor, yes, it is. They can handle spent fuel in a
25 pool and they have the capability to do that. The

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1 question is will infrastructure be there for the
2 standalone ISFSIs?

3 FACILITATOR LESLIE: Okay.

4 MR. NICHOL: Marc Nichol from NEI. I wanted
5 to address that. You brought it up earlier, as well,
6 and you're exactly right. If the COC due to some aging
7 management or other aspects has some type of need or
8 requirement for a facility to perform that aging
9 management, then the general licensees will either have
10 to have that facility or build those capabilities in.

11 The alternative would be to come in for some
12 exemption to do an alternative to that, and the NRC would
13 have to approve that. But I think the point here is that,
14 one, we're not foreseeing any aging management
15 mitigation things that would require large facilities,
16 but even if they were to become part of the COC, the
17 shutdown ISFSIs would have to build in those
18 capabilities.

19 FACILITATOR LESLIE: Rod?

20 MR. McCULLUM: Yes, a separate issue. I think
21 I'm hearing a potential undertone in some of the
22 discussion here. I want to ask if this is, indeed -- is
23 it a possible outcome of your deliberations that you
24 might come up with new requirements for shutdown ISFSIs
25 that would apply to plants that have not yet shut down,

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1 but not be backfit onto plants that have already shut
2 down?

3 MS. DAVIS: I can't address that at this
4 point. I think it's entirely possible, but we haven't
5 gone far enough in this analysis to be able to tell either
6 way.

7 MR. WATERS: Yes, I think you're looking too
8 far down the road. That's why we're trying to get the
9 feedback on this, and to -- I think consideration, we're
10 purposely calling it consideration. That's why we're
11 calling them considerations or defining them, that's
12 what we're getting feedback on.

13 FACILITATOR LESLIE: Yes. And I think Mike
14 said it a little bit earlier. You know, NRC wants to
15 solve problems that exist but doesn't also want to create
16 problems as they go forward. So, for this topic it's
17 not necessarily solving a problem, but whatever they
18 do in this whole framework, I think what they're trying
19 to make sure is that they're looking forward, and it
20 sounds like they are so far, but not going to cause
21 additional issues. Marc?

22 MR. NICHOL: Okay. Marc Nichol, NEI, again.
23 Switching gears a little bit, one thing that was in your
24 issue summary wasn't in your presentation, but it was
25 consideration of financial assurance. And I wanted to

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1 point out that there are going to be some differences
2 between financial assurance for say reactors, and
3 financial assurance for say used fuel.

4 And the consideration, specifically, is
5 that DOE has the obligation to take that used fuel off
6 site. Further to that, the ratepayers had already been
7 paying for those services from DOE. And beyond that,
8 of course, DOE has the contractual obligation. And a
9 lot of the utilities have settlements in place with DOE,
10 such that they're being compensated for that.

11 So, if you are to consider financial
12 assurance, there is a much different model for used fuel
13 than there are for other activities that NRC looks at.

14 MS. DAVIS: Yes, good point.

15 FACILITATOR LESLIE: Okay, Jennifer. With
16 about 10 minutes to go, are there -- you can remember
17 your list of things, but are there things that you still
18 need to hear in terms of are there missing issues? And,
19 again, this is to the audience, as well, are there other
20 things that Jennifer should be thinking about as she
21 tries to deal with the input and go back and look at
22 some of the documents in terms of how she's moving
23 forward. Jen, do you --

24 MS. DAVIS: Well, I guess the only thing I
25 would say is kind of what I've said already, is we're

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1 starting out, we want to look at a lot of the background
2 information, including what's out there already for
3 specific licenses, COCs, general licenses. We want to
4 look at the assumptions underlying some of the
5 regulations. And we do welcome your input. I mean, I
6 think I've gotten a lot of useful information here. And,
7 certainly, I just -- you know, my goal is to make this
8 work better, so that's something that I'm going to kind
9 of keep operating under. So, certainly, if you all think
10 it's heading in a direction that's not better, I know
11 you wouldn't be hesitant to let us know, but please let
12 us know.

13 FACILITATOR LESLIE: Julie, can I see if
14 there are any other questions or comments on the phone?

15 OPERATOR: Once again, to ask a question
16 please press *1. One moment. At this time, there are
17 no questions.

18 FACILITATOR LESLIE: Thank you, Julie. And
19 we have one or more here.

20 MR. CALLAHAN: Hi, Mike Callahan. I'm here
21 in D.C. for the Decommissioning Plant Coalition.

22 One of the items that Brian raised in his
23 slides was that it's been a long-held tenet of the
24 Commission that they do not endorse long-term storage,
25 long-term on-site storage. They say it consistently when

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1 they revise their Waste Confidence Decision, et cetera.

2 We really want to emphasize that there needs
3 to be a consideration as we go forward in regulating
4 ISFSIs, standalone ISFSIs, that that be a consideration;
5 that what we're undertaking does not in advertently
6 contradict Commission policy, that the actions we wind
7 up taking do not endorse indefinite long-term storage
8 on site.

9 When the decommissioned plants hear some
10 of the proposals coming out, or some of the things that
11 we're worried about, we have a tendency to start to
12 believe that there is little going on on the staff's
13 work that will carry out that intent. So, I would hope
14 that a takeaway is that as you approach your activities,
15 and as you go through these, we do not inadvertently
16 or intentionally, but inadvertently continue to promote
17 or promote indefinite on-site storage.

18 That's especially true given what Brian
19 referred to as this growing consensus and growing effort
20 to get the material from the decommissioned sites sooner
21 than we would have thought even a year ago. And that's
22 just one thing I'd ask you to take away as you go about
23 your activities. Thank you.

24 FACILITATOR LESLIE: Thanks.

25 MR. WATERS: Can I respond, and I agree, and

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1 I think the latest I've seen on paper of Commission is
2 we do not endorse indefinite storage. I don't know if
3 that means we shouldn't consider the possibility of
4 storage for a longer term than expected. Is that a
5 correct way with what we're doing? I'm just
6 sensitive if there's -- if you see evidence or a
7 perception that we are taking regulatory action,
8 especially in licensing actions that we're doing because
9 we think we have a 200-year storage created in our mind,
10 I'd like to really understand that because that is
11 concerning me, as well.

12 And Brian mentioned, I -- we have very
13 little control over national policy, where the spent
14 fuel goes. And we have to regulate it. We don't endorse
15 any central management policy per se other than -- and
16 we don't endorse the storage, so my question is if a
17 CIS was available two years from now, five years from
18 now, are there any ideas or suggestions where we need
19 to improve the regulatory framework to support that?

20 I've heard from NEI in the past that they
21 think our Part 72 structure is fine right now for
22 situations from storage. I've heard things about
23 transportation, so on that aspect, on that
24 non-indefinite site are there any ideas or areas where
25 we need to focus on to improve the framework for that,

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1 that scenario, that would support standalone ISFSI?

2 MS. DAVIS: Oh, issue SECY.

3 MR. WATERS: Yes, issue SECY.

4 MR. CALLAHAN: Well, the title of Brian's
5 presentation was "Sharpening the Focus." And I think
6 that's the big concern we have right now, is that there
7 is this beginning activity on the part of the DOE, et
8 cetera, to go out and to begin to do the things they
9 started to do 10 and 12 years ago on site in preparation
10 for some sort of progress forward.

11 So, I think that you have to get yourself
12 into a mind set that this may actually happen, sharpen
13 your focus and integrate your resources to that. It's
14 not that the -- then your licensing decisions will be
15 informed by the fact that, you know, there really is
16 this activity going on, and there really is this new
17 emphasis going on. There really is this new assumption
18 going on. That's the chief thing, I think, that has to
19 occur first.

20 FACILITATOR LESLIE: And you are, again?

21 MR. CALLAHAN: I'm sorry, Mike Callahan.

22 FACILITATOR LESLIE: Kris?

23 MS. BANOVA: Just a quick clarification,
24 Mike. So, you don't see any changes that are needed to
25 the regulatory framework to support that, but you're

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1 saying it's more of a resource planning, that we need
2 to be ready for that, and have a --

3 MR. CALLAHAN: That's first.

4 MS. BANOVA: Okay.

5 MS. DAVIS: Or even a mind set, it sounds
6 like.

7 MR. CALLAHAN: Integration of resources and
8 focus on the fact that this is an emerging program, as
9 much possibility as going forward as the assumption that
10 it might have to be there for 100 to 300 years for our
11 plants, for sites as they shut down.

12 You know, I think if you were starting to
13 do -- as you, for instance, where should a spent fuel
14 pool handling facility be in best practices? You don't
15 set national policy, but you set safety policy. So, where
16 should one of those be? Should we have one at each of
17 the 10 sites, or should there be one?

18 You have to have a platform on which to
19 build, so -- but I guess in response to your direct
20 question, I don't see any -- I think the licensing issues
21 will fall out and be resolvable once there's a
22 recognition that this program is going to go forward,
23 can go -- has some weight to go forward, and you begin
24 to focus on integrating resources toward it, toward the
25 nearer term activities rather than some of these longer

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1 term things that we continue to see.

2 MS. DAVIS: And some of this I need to point
3 out is, you know, Commission-level type of thing, and
4 I don't know if you all have communicated to the
5 Commission itself rather than the staff.

6 MR. CALLAHAN: We try --

7 (Laughter.)

8 MR. CALLAHAN: We've been more direct here
9 today than we've been with them, but we have. And we
10 also -- this is Mike Callahan, again. And we also make
11 sure that the EDO and the Deputy EDO know what we're
12 communicating, as well. And we hope that they get that
13 down -- and Cathy.

14 MS. DAVIS: Okay.

15 MR. CALLAHAN: And we hope that gets down
16 to you, as well. But yes, we understand.

17 MS. DAVIS: All right. And I figured you had
18 been communicating given the items that were on Brian's
19 last couple of slides. I know you're familiar enough
20 with the process. I just wanted to make sure.

21 FACILITATOR LESLIE: Jen, I had put on the
22 parking lot from this morning, you had said well, you
23 know, Charley Haughney's story might -- do you need any
24 amplification?

25 MS. DAVIS: I don't think so. I took notes

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1 this morning while Charley was talking, and we spoke
2 a little in the break, so unless he has something he
3 wants to add, I am comfortable with that.

4 MR. HAUGHNEY: Charley Haughney. I've got
5 one issue but it's procedural.

6 MS. DAVIS: All right.

7 MR. HAUGHNEY: I think it's a little too
8 complicated to discuss before the break. But just in
9 a capsule, got a Part 50 possession only license, and
10 you're using a general license to store fuel. You need
11 to at some point -- this is a hypothesis, change to a
12 Part 72 license.

13 The NRC receives and docketed your
14 application and puts a Federal Register Notice out
15 announcing the receipt of the application and an
16 opportunity for a hearing. Now here's my heartburn, why
17 have a hearing? It's much like the situation you have
18 while you're still operating. There's no particular new
19 environmental impact, there's no safety concerns, but
20 I believe that a hearing still has to be offered. And
21 if someone has standing and raises a contention that's
22 accepted, then we've got one.

23 And I personally think that would be a
24 colossal waste of time and resources in the public health
25 and safety perspective. But I think if it's available,

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1 we ought to look at procedures to get it unavailable.
2 And that could be a hell of a lot of work, but just my
3 idea.

4 FACILITATOR LESLIE: Thanks, Charley. I've
5 got one more question in the back.

6 MR. LIU: This is Yung Liu, Idaho National
7 Laboratory. The phrase aging management came up a couple
8 of times, so I was sitting back and thinking about it.
9 If I remember in NUREG 1927, which is the license renewal
10 for the ISFSI and COCs, and it requires the applicant
11 to do two things. One is to have an aging management
12 program, and the other is the time-limited aging
13 analysis.

14 My comment regarding these standalone
15 ISFSIs, do people wait until like two years before the
16 license renewal term come up and start sending
17 applications to do aging management programs, and TRAAs,
18 or they start doing that on day one?

19 Some of these ISFSIs require daily
20 walkdowns to check the vent and things like that, so
21 resource-wise I think the standalone ISFSIs, I cannot
22 possibly imagine that they have the same rigor, you know,
23 as they do with the regular ISFSIs. That's just a
24 comment.

25 FACILITATOR LESLIE: Thank you. Okay. Going

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1 to be turning to the NRC staff here in a little bit.
2 Rod, go ahead.

3 MR. McCULLUM: Yes. Rod McCullum, NEI. I just
4 wanted to for the record answer the question Mike posed
5 a little while ago. I don't think we formally answered
6 it. It still is industry's position that Part 72 would
7 be adequate for a centralized or consolidated storage
8 facility.

9 One thing NRC should think about, and in
10 deference to the folks in the recycling community, is
11 does NRC -- and this is not you guys, but does NRC have
12 sufficient regulations in place for everything that
13 might happen in conjunction with a consolidated storage
14 facility, particularly the effort for a recycling
15 regulation that has been started, and is kind of starved
16 for resources right now. You know, if national
17 decisions, again, NRC doesn't make policy, I understand,
18 but if national decisions are made that the consolidated
19 interim storage happens in conjunction with something
20 like recycling, there are other regulatory components
21 that would be needed. But if consolidated storage is
22 consolidated storage, we believe Part 72 is adequate.

23 FACILITATOR LESLIE: Thanks, Rod. Any final
24 comments from the NRC staff here? Jen?

25 MS. DAVIS: I just wanted to say thank you.

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1 This is a lot of good information, and I would expect
2 that some of this will be reflected in the FRM when it
3 comes out in January.

4 FACILITATOR LESLIE: Okay. I'd like to thank
5 Brian for sharing his concerns here today, and availing
6 himself of the opportunity. I think it added to this
7 discussion we've had.

8 We're scheduled to go into the next session
9 on applicability, compatibility, and consistency with
10 Kris Banovac. And I'll look around the room, quick show
11 of hands, do we need a five-minute break, or do we want
12 to -- okay. I've gotten so many hands up, including the
13 speaker that we'll take a five-minute break, and we'll
14 back here at 2:10.

15 (Whereupon, the proceedings went off the
16 record at 2:02:02 p.m., and went back on the record at
17 2:10:41 p.m.)

18 FACILITATOR LESLIE: We've got two sessions,
19 two of the technical sessions done. Now moving on to
20 the next one, and Kris Banovac will be the one laying
21 out the framework for that. And, Kris, I'm going to let
22 you go ahead and get started. We're starting a little
23 late, but I'm sure with your energy and enthusiasm we'll
24 catch right back up again.

25 MS. BANOVA: Okay. And I also talk very

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1 fast, too. I want to check on the mikes. Can you guys
2 hear me okay?

3 FACILITATOR LESLIE: No.

4 MS. BANOVA: Okay. How is this? Is that any
5 better?

6 FACILITATOR LESLIE: Still speak up, you've
7 got to speak up.

8 MS. BANOVA: Is this any better?

9 FACILITATOR LESLIE: Yes.

10 MS. BANOVA: Okay. I'm shouting, and I'll
11 try to shout. Let me know if I get too loud now.

12 So, today I'm going to talk about the issue
13 of a very long title, Applicability, Compatibility and
14 Consistency of Our Spent Fuel Storage Framework, and
15 the Requirements and Guidance for Specific Licenses,
16 General Licenses, and COCs. It's kind of a crazy title,
17 but I hope by the end of my short presentation I'll be
18 able to frame this topic, and hopefully we can have a
19 wonderful discussion as we've been having all day. Next
20 slide, please.

21 I first want to provide just a little bit
22 of background to get everybody on the same page. Part
23 72 was originally promulgated in 1980, and over the past
24 30 years Part 72 has been modified multiple times. Part
25 72 does establish requirements for a specific license

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1 for storage of spent fuel in an independent spent fuel
2 storage installation, or ISFSI. It provides
3 requirements for the general license for storage in an
4 ISFSI, and also requirements for a Certificate of
5 Compliance for spent fuel storage cask design for use
6 by the general licensee.

7 Requirements in Part 72 also address both
8 wet and dry modes of storage. And Part 72 also
9 establishes requirements for the monitoring of
10 retrievable storage or MRS, which is applicable only
11 to the Department of Energy. And licensing requirements
12 are linked to the repository at Yucca Mountain.

13 Because Part 72 addresses these various
14 requirements, in 2000 we added 72.13, the Applicability
15 section to Part 72. And this section is sort of a map
16 to help navigate the requirements in Part 72. And it
17 lays out which requirements in Part 72 are applicable
18 to specific licensees, general licensees, and COCs. Next
19 slide.

20 Part 72, Subpart K does provide the general
21 license to Part 50 and 52 licensees for storage of spent
22 fuel in a ISFSI at their site. So, certain requirements
23 for storage of spent fuel actually are based in Part
24 50. Next slide.

25 So, because the requirements for specific

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1 ISFSIs, general licensees, and COCs are set forth in
2 both Part 72 and 50 in these two separate frameworks
3 there have been questions regarding the applicability
4 and consistency of the requirements between Part 72 and
5 50, but also within Part 72 itself, and the consistency
6 of the requirements as they apply to specific, general,
7 and COCs.

8 And also through our experiences with the
9 general license framework over the past 20-25 years,
10 issues have arisen regarding the interface of Part 50
11 and 72, how those two frameworks work together. And,
12 specifically, with how the two frameworks apply and work
13 together during cask loading, unloading, or handling
14 in the Part 50 facility. Next slide.

15 And because of the questions we've
16 encountered so far, we are planning to look at Part 72
17 and Part 50 to see if there's any improvements we can
18 make to the current framework to insure that the
19 requirements are clear, that they're consistent as
20 appropriate for specific licensees, general licensees,
21 and COCs. And we do want to insure that we have an
22 effective regulatory framework, and effective
23 implementation of that framework.

24 And over the next few slides I'd like to
25 lay out some of our current staff considerations in this

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1 area, just to get folks thinking and to kick off our
2 discussion. Next slide.

3 So, one of our thoughts is do we need to
4 further align requirements for specific licensees,
5 general licensees, and COCs. Some thoughts on first
6 aligning these requirements or how to further align
7 these requirements is to look at 72.13, the existing
8 72.13 to insure that it does appropriately map out the
9 requirements for specific, general, and COCs.

10 We're also considering whether there's a
11 need to revise specific regulations. For example, where
12 there are separate criticality requirements for the
13 specific ISFSI, and then separate requirements for a
14 COC, and the words and the regulations are different.
15 Should we be looking at the regulations to see if we
16 can make those requirements more consistent and
17 compatible.

18 And another thought, and this would be a
19 much larger change is, is there a need to restructure
20 to Part 72 to make it more clear. You know, for example,
21 could we group regulations for dry cask design
22 requirements? So, there's one set of performance
23 requirements for dry casks no matter whether that cask
24 is used at a general license ISFSI, versus a specific
25 license ISFSI, or some of the requirements in Part 72

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1 are applicable only to wet modes of storage, so should
2 we group those requirements and separate out those
3 requirements?

4 Of course, any big restructuring or
5 changing of Part 72, one of the big things we need to
6 keep in mind is any potential burden on the users. So,
7 with the potential burden on our licensees, vendors,
8 and, of course, NRC on learning and using a restructured
9 Part 72. And, actually, that's something we'd like to
10 get your input on today. Next slide.

11 So, as part of the review, as I mentioned,
12 we will review the requirements. We'll be looking at
13 the Statements of Consideration for the different rule
14 makings in Part 72, associated guidance, and also staff
15 interpretations, and legal interpretations we've had
16 over the years on certain requirements to determine if
17 there's any clarifications that are warranted.

18 We have started mapping out the
19 requirements in Part 72 and Part 50 for specific
20 licenses, general licenses, and COCs. And we have
21 identified some potential areas where we think we can
22 either clarify the requirements, or to improve
23 consistency in those requirements.

24 And there are other areas, specific areas
25 of clarification in the requirements that we have heard

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1 from industry and our stakeholders, so we are compiling
2 a list where we think we might be able to clarify some
3 specific regulations.

4 So, on this slide I just wanted to highlight
5 a few areas. There are many others, but just a few to
6 kind of get folks thinking and brainstorming on some
7 specific areas that could be clarified.

8 You know, one example in 72.212(a)(3), this
9 states that the general license commences upon the date
10 that the cask is first used to store fuel. However,
11 there are requirements in Subpart K that apply to the
12 general licensee well before the cask is used to store
13 fuel, especially the 72.212 evaluations that need to
14 be conducted to even determine whether that cask could
15 be used at that facility. So, that's one area where there
16 may be some room for clarification in the language of
17 that regulation.

18 This next bullet, actually this is kind of
19 applicable to what Jennifer was discussing with the
20 standalone ISFSIs, and decommissioning. We do have a
21 regulation in 72.218 that requires that the Part 50.
22 It points to Part 50, the spent fuel management plan
23 in 50.54(b)(b). So, 72.218 requires that Part 50 plan
24 to consider include plans for the removal of fuel from
25 the sites, and also for the plan to show how spent fuel

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1 will be managed and ultimately removed from the site
2 before starting to decommission the systems and
3 components that are needed for moving and handling fuel.

4 72.218 also points to the license
5 termination requirements in 50.82, and requires that
6 the license termination plan to describe how the spent
7 fuel stored under the general license will ultimately
8 be removed from the site. However, if you go to
9 50.54(b)(b) and 50.82 there's not a similar cross
10 reference to 72.218, so this may be a place to sort of
11 close that circle and include the reference there as
12 a clarification.

13 And then just a last example to throw out
14 here. In 72.248(a)(1), this is the requirement for the
15 certificate holder to submit an original SAR to the
16 NRC within 90 days after we've approved the original
17 cask design. And one thought is with the multiple COC
18 amendments under a system, that COC amendments may not
19 necessarily encompass or supersede a previous
20 amendment. And in some ways can be considered a
21 standalone COC, so we're considering clarifying the
22 applicability of this requirement to COC amendments,
23 and not just the original issuance of the COC.

24 So, that's just a few examples to throw out
25 to get folks thinking so we can have a good discussion

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1 later. Next slide, please.

2 Okay. And, finally, whether or not we end
3 up recommending any changes to the regulations, we are
4 considering whether we need to develop any guidance to
5 address some areas where questions come up repeatedly.
6 For example, would it be beneficial to have some guidance
7 that discusses the interface of Part 50 and 72, and how
8 those two frameworks work together, including the scope
9 of the Part 72 storage cask certification, and what
10 analyses are conducted in that cask certification versus
11 how the Part 50 programs are relied upon for certain
12 safety aspects of cask loading. So, would it beneficial
13 to have some guidance that discusses that even if we're
14 not -- we don't think there's a need to change
15 requirements.

16 Guidance could also discuss the
17 applicability of certain Part 72 requirements, such
18 as those requirements in Part 72 in a Part 50 facility.

19 Would there be a benefit to having any
20 guidance that discusses the general license framework
21 and the process, or perhaps guidance that addresses some
22 considerations that are unique to the standalone ISFSI
23 sites that Jennifer just discussed? So, regardless of
24 whether or not we think we need to clarify or change
25 any regulations, we also want to be thinking about is

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1 there anything we can do in guidance to help address
2 some of these questions and issues that have come up
3 repeatedly. Next slide.

4 So, in conclusion we feel that we have a
5 good opportunity here to clarify the regulatory
6 framework, so we want to get your ideas today on any
7 clarifications that you feel are needed recognizing that
8 we have discussed some specific issues today, so this
9 is in a way a catch all. And I know one of the --- before
10 we jump into the discussion, one of the issues that came
11 up earlier was the question of the standardized COC,
12 and technical specifications, and whether we want to
13 update our guidance on that, or whether we should
14 actually include some requirements on Part 72 for
15 criteria, and what should be in the tech specs, and in
16 the COC conditions. So, any feedback like that we'll
17 be happy to get today. So, thank you.

18 FACILITATOR LESLIE: Kris. You caught me off
19 guard. Kris, thanks for putting that together, and
20 laying out some things. So, Rod, she kind of tossed the
21 ball into your court. We thought it was going to be -- I
22 had originally put down there that -- and I'll give you
23 time to --

24 MR. McCULLUM: Well, I'm already prepared
25 because Marc is here today. So, I'm going to take the

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1 ball and I'm going to hand it off. The short answer is
2 we do believe it needs to be addressed by a rule, and
3 Marc will explain that.

4 MR. NICHOL: Yes, Marc Nichol, NEI. First,
5 I want to start out, Kristina, by saying -- you know,
6 applauding you on the list of your considerations, and
7 I guess the breadth that you've looked at this type of
8 issue. From my perspective, you really thought of it
9 from as big of a picture as possible in terms of how
10 the most efficiencies and benefits could come about.
11 So, I applaud you in thinking big in this.

12 And there are a lot of specific
13 considerations in there, so I think you've given a lot
14 of detail in terms of where you're thinking about, and
15 I won't try to take on all of those at once. So, I'll
16 just start at the beginning and let them flow.

17 You did mention the concept of standardized
18 COC, and the tech specs are part of the COC, so I'll
19 call it a standardized COC rather than tech spec COC.

20 And following last year's NRC workshop in July,
21 industry -- prior to that, and then following that
22 industry gave a lot of thought into terms of what
23 additional improvements we thought might have merit in
24 this area. And we started to put them together. We've
25 been considering whether we may want to petition for

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1 a rulemaking or not. But there were three in there that
2 I just wanted to mention, and they may be part of this
3 conversation today, or they may not be.

4 The first one is standardized COC, and what
5 our conclusion was that the criteria for the COC really
6 needs to be in the regulation. And we looked at a lot
7 of precedents. There was precedents in Part 50 where
8 they had a similar situation. Their tech specs were not
9 very standardized. They were having issues with the
10 appropriateness of the detail within them. They
11 ultimately resolved that by putting criteria in the
12 regulations. We found a lot of parallels with the
13 situation we're in today with cask COCs.

14 The other thing we noticed is that the
15 site-specific already has a standardized -- already has
16 tech spec requirements in Part 72, although it didn't
17 have criteria. We believe criteria needs to be an
18 integral part in that, so we think that's the best way
19 to approach it.

20 We know that standardized COC has been
21 addressed in the past through guidance. We don't really
22 see it as being very successful. There's been a low
23 adoption rate. Even some of the applicants that I've
24 talked to recently that have tried to adopt this
25 standardized COC in the NRC's NUREG have found that the

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1 NRC still comes back and requests things to be put in
2 there beyond things in the guidance. And that guidance
3 was developed by NRC, so we think the stability really
4 comes from putting that in the regulations themselves.

5 The other two I'll just mention, and I won't
6 go into as much detail. I want other people to talk,
7 as well. The other two areas that we think are deserving
8 of, or should be considered for improvement, one is in
9 the Backfit Rule, 72.62, currently applies to licensees
10 both general and site-specific. The same rationale for
11 applying the rules to those licensees exists for
12 applying the rules to COC holders and COCs. So, we
13 believe that that's something that should be brought
14 into effect.

15 And then the third one, and I would
16 encourage the NRC to look beyond just the framework of
17 the regulations, but look at the framework of the
18 guidance. So, in the storage and transportation of casks
19 there are three standard review plans, not counting the
20 renewal, so there's a site-specific standard renewal
21 standard review plan, general license standard review
22 plan, and then a COC standard review plan. And then
23 there's a transportation standard review plan.

24 There's a lot of overlapping content, and
25 I think that overlapping content has led to the extensive

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1 use of ISGs, Interim Staff Guidance. And it's also
2 contributed to their persistence for long periods of
3 time, some for more than 10 years because to be able
4 to phase out an ISG you have to incorporate it into all
5 of the standard review plans. And sometimes that's a
6 little bit difficult, so perhaps improvements to the
7 structure of the framework of guidance could lead to
8 more efficiencies and effectiveness, as well.

9 So, I'll leave it at. I have more comments,
10 but --

11 FACILITATOR LESLIE: Marc, appreciate
12 setting out some things, again, addressing my questions
13 what's missing from the list. So, I'll look around the
14 room. Right now I'm not seeing lots of hands, so I might
15 be coming back to you sooner than you think, Marc.

16 But, again, Kris only had a few of the items
17 in terms of the regulations that may need to be
18 considered. You guys think in terms that she's
19 identified them all, or there are others?

20 MR. GUTHERMAN: All right. This is Brian
21 Gutherman, and I'll start off by saying these are my
22 remarks, they're not representative of industry's
23 position, or even NEI's position. I do a lot of 212
24 reports for ISFSI licensees, so this is the foundation
25 from where the remarks come from.

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1 Could you go to Slide 7, please? I think
2 it might be helpful to look at that slide while I speak.

3 The first item there, it's not clear to me what, again,
4 what the problem is we would be solving with that. Every
5 licensee, general licensee that I'm aware of goes
6 through an exhaustive compliance process, puts their
7 212 together, signs it off, does all the evaluations
8 before they would ever even think of moving fuel, so
9 I'm just saving the question for a moment later after
10 I get through, and we'll talk about that as a question.
11 The other ones are just remarks.

12 The third bullet up there I think is a very
13 good one. Two things I would suggest is that the 90 days
14 could be much shorter in as much as by the time the ISFSI
15 -- or by the time the amendment is approved it's gone
16 through rulemaking, the technical review is done, the
17 FSAR pages should be final, and that's to be able to
18 be done within the 30 days. And the reason that's
19 important is if a general licensee is going to adopt
20 that amendment, 90 days is an awful long time to wait
21 for an FSAR revision to come out.

22 Secondly, I would offer that if you do
23 proceed with that change make sure the 24-month clock
24 resets at that submittal so licensees -- or, I'm sorry,
25 COC holders get the full advantage of that time frame.

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1 Lastly, 72.212(b)(10) is the programs
2 review part of 212. That contains some language now that
3 implies that there is a different type of approval
4 process for determining whether the changes to the
5 programs will reduce the effectiveness. And it says go
6 get the approvals that you need. It may be simpler just
7 to point to Part 50 and say do whatever the Part 50
8 process says for security, QA, or any other program that
9 comes under (b)(10). And that's my laundry list. Thank
10 you.

11 FACILITATOR LESLIE: Okay. So, Brian,
12 thanks, and can you rephrase your question and make sure
13 Kris-

14 MR. GUTHERMAN: Yes, it's -- I'm asking
15 again the change of thinking about for 212(a)(3), I'm
16 just curious as to what prompted that thought process
17 in as much as I know the general licensees are pretty
18 good about making sure they comply before they operate.

19 FACILITATOR LESLIE: Thanks, Brian.

20 MS. BANOVA: I think the idea actually came
21 up in inspection and enforcement. So, as the inspectors
22 are out there, they're looking at the 72.212
23 evaluations. If there is a compliance issue with any
24 of the requirements that need to be met before the cask
25 gets used, you do have a requirement that says

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1 essentially the general license hasn't commenced yet.
2 So, it's a thought but -- so there -- you know, it's
3 -- the requirements do apply before the cask gets used,
4 but yet we have a requirement that says the general
5 license hasn't started yet.

6 MR. GUTHERMAN: This is Brian. So, you
7 actually have general licensees saying that doesn't
8 count because we're not a licensee yet? Please tell me
9 it's not true.

10 (Laughter.)

11 MR. NICHOL: Marc Nichol from NEI. I believe
12 perhaps clarity could be introduced into the
13 regulations, but I think they're accurate. If you go
14 back to I believe 72.210, it's very clear there that
15 all Part 50 and 52 licensees are granted general license.
16 So, they are general licensees.

17 I believe what 72.212(a)(3) is talking
18 about is really the term for that particular cask in
19 terms of it's storage license terms. So, I believe the
20 regulations are accurate. Whether they're clear or
21 misinterpreted in some situations is a different
22 discussion, though.

23 MS. BANOVA: Yes. And I think the language
24 actually in this regulation was added during the recent
25 rulemaking when we were talking about the storage terms

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1 for the renewals.

2 FACILITATOR LESLIE: I've got a couple of
3 questions in the back and then come back up.

4 MS. LEBLANG: Suzanne Leblang from Entergy,
5 and I will say that as probably maybe even more dealing
6 with licensees, this question comes up very often from
7 a new time user, and they don't understand, and they
8 feel that there is clarification needed to that of when
9 they actually implement.

10 FACILITATOR LESLIE: Thanks, Suzanne. Rod?

11 MR. McCULLUM: Let Marc finish.

12 (Side comments.)

13 FACILITATOR LESLIE: Okay, on the record.
14 I think we're going to move on to some other topic unless,
15 Rod, you have something to add to the existing topic.

16 MR. McCULLUM: Yes, on the existing topic,
17 which we've talked here through some rule changes NRC
18 is considering. We've talked through some rule changes
19 that industry would like to see. I just want to point
20 out again that we think these are synergistic, and if
21 there's a threshold for how much improvement is needed
22 before a rulemaking is warranted, looking at both what
23 NRC might be considering, and what industry is going
24 to be considering would be valuable.

25 This is why I was requesting the time table

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1 for moving forward earlier. I can assure you that you
2 will be hearing from industry before the January time
3 frame when you would be going through your next step,
4 except for repeatability. I understand how that's
5 separate now, but these aren't those issues.

6 So, we'd certainly appreciate if when NRC
7 goes out and questions all the stakeholders on potential
8 for rulemaking, you certainly also refer to and ask about
9 both the things you're considering as well as some things
10 that we would like to be considered that Marc was just
11 delineating.

12 FACILITATOR LESLIE: Thank you.

13 MR. NICHOL: Marc Nichol at NEI again. The
14 previous slide, Slide 6, I want to discuss the
15 applicability section, Part 72.13. And one of the things
16 that we learned or discovered as we were going back to
17 look at this question is 72.62, the backfit, and as we
18 were considering how that might be applied to COCs and
19 COC holders.

20 We found some Statements of Considerations.
21 I think it was during the rulemaking for Section 72.13.
22 I don't remember exactly. But, anyway, the Commission
23 wrote back -- the comment was that 72.13 should apply
24 the backfit to COC holders. The Commission's response
25 was that that cannot be implemented through 72.13

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1 because that regulation 72.62 didn't specifically grant
2 backfit to the COC holders.

3 And further in their comment, I believe what
4 they said is that 72.13 does not establish the
5 applicability of requirements to either site-specific,
6 general, or COC holders. It's merely a summary. And the
7 applicability of a requirement is within that specific
8 requirement in the regulation, so I'm not sure exactly
9 what you were thinking about in terms of how you might
10 look at 72.13, whether you're looking at remapping it
11 to reapply, change to the applicability, or if you were
12 just looking at it as there could be some inaccuracies
13 in the mapping. But I just wanted to offer that up, you
14 might check that in your consideration.

15 The other thing I noticed when you talk
16 about later on this slide is restructuring Part 72 and
17 grouping them in different areas. If that were to move
18 forward, perhaps it would eliminate the need for Section
19 72.13. And, quite frankly, 72.13 is quite complex in
20 terms of how it's all mapped. So, if it were grouped
21 better, you may not need 72.13. It may be much more clear
22 how these regulations apply. And, certainly, if there's
23 more consistency regulations apply similarly to
24 different entities would be even more intuitive. So,
25 I think there are great potential benefits to doing that

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1 type of restructuring. But you did note that there could
2 be a lot of resource burdens. And you specifically
3 mentioned licensee, COC holders.

4 I would also think NRC would have some
5 significant resources to implement such a large
6 restructuring, but perhaps on the licensee, COC side,
7 some type of grandfathering could be granted such that
8 the new restructuring of the rule could take effect,
9 but perhaps licenses and COCs would not have to be
10 rewritten, that only the licenses and COCs going forward
11 would need to conform to whatever the new format is.
12 Just a consideration.

13 FACILITATOR LESLIE: Suzanne, did you have
14 something?

15 MS. LEBLANG: Suzanne Leblang from Entergy.
16 And I think there's one that we have discussed before,
17 and perhaps there has been some guidance on, and that's
18 72.48, when it needs to be performed to the 72.212. And
19 I believe that the current wording says when there's
20 a change to the 212, and it leads to a lot of confusion
21 as to whether or not section 72.48 is needed when 212
22 is originally written or not.

23 FACILITATOR LESLIE: Thanks, Suzanne. Kris,
24 was that clear?

25 MS. BANOVA: Yes.

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1 FACILITATOR LESLIE: Okay. Thank you. I'm
2 counting on everyone to point me to the right people.

3 MR. BENNER: Eric Benner, NRC. I don't if
4 I'm the right person to highlight this question. We just
5 issued a RIS on this issue.

6 FACILITATOR LESLIE: I'm going to ask
7 Darren to give me some new batteries. This is fading
8 in and out.

9 MR. BENNER: Suzanne, I'm not hiding from
10 you. You might be able to see me in the mirror. I'm not
11 quite sure.

12 We just issued a RIS on this subject because
13 there did seem to be some confusion on what that means.
14 That provision is for changes to the 72.212, that if
15 you're going to change your 72.212 that you have to do
16 72.48 evaluation. That did not obviate the need to, if
17 you are going to do something different from the FSAR
18 for the system you chose to use, you need to do a 72.48
19 on that.

20 Now, when exactly you do that, you know,
21 it just has to be in place when you're ready to move
22 forward. So, we're not mandating that you do that right
23 away, but some licensees were saying oh, well, 72.48
24 doesn't apply until after I do my 72.212. And that's
25 not the case, so they were sort of wrapping up different

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1 evaluations in their 72.212 that we felt were
2 inappropriate. 72.212 is really your demonstration that
3 you are in conformance with the certificate and the FSAR,
4 and 72.48 is when you want to make changes to either
5 of those. Either you want to diverge from the FSAR or
6 after your 72.212 is done, if you want to subsequently
7 diverge from that.

8 FACILITATOR LESLIE: Thanks, Eric. We're
9 back on the record now. I don't know what's cutting in
10 and out, but --

11 MS. LEBLANG: Suzanne Leblang from Entergy.
12 And I would just submit the RIS is out and it does provide
13 that information, but by revising the wording in 212
14 to make it clearer taking the information from the RIS,
15 that would be my suggestion.

16 FACILITATOR LESLIE: Okay. Thanks, Suzanne.

17 MR. BENNER: I think clearly we would, if
18 we were going to revise 212, we could look to see if
19 we could just change the wording so that ambiguity was
20 eliminated.

21 FACILITATOR LESLIE: Thanks, Eric. Other
22 questions, comments? Okay. We've got a new face. I'm
23 always --

24 MR. ANTON: Hi, this is Stefan Anton from
25 Holtec International.

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1 MS. DAVIS: Excuse me. That mike still is
2 not working.

3 MR. ANTON: Okay. This is Stefan Anton from
4 Holtec International. And I want to just to comment again
5 on the consideration of restructuring of Part 72. Just
6 the idea makes me shiver. I mean, we are --

7 (Laughter.)

8 MR. ANTON: So, I think just reorganizing
9 Part 72 and giving things different number that
10 everybody is used to, I kind of -- I don't really see
11 any need for that. It would probably create more
12 confusion than it -- because then you have before and
13 after things like this, and suddenly it's no longer
14 called 72.48, it's 72.23 or something like this. And
15 I think that would concern me. If that's the only purpose
16 of that, just reorganizing the numbers, there would have
17 to be a clear benefit of doing other things at the same
18 time before I would suggest going into that direction.

19 FACILITATOR LESLIE: Thank you, Stefan.

20 MR. WATERS: This is Mike Waters. And part
21 of the regulatory guide here, you know, we had the
22 site-specific license requirements, and it was part of
23 -- we had the general license, and then we learned
24 lessons through those, recognized well there -- you've
25 got to be clear what applies under original regulations.

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1 And it's almost as much as how we got here. And, yes,
2 we're not looking to rearrange regulations for the sake
3 of it, but recognize the new paradigm, keep using new
4 paradigm, the administrative processes in licensing,
5 and the burdens, and complex -- 213 is all we have right
6 now, and it's complex itself. Is there a better way to
7 do this in the next 20, 30 years for continued
8 certifications and site-specific licenses. And that's
9 why we're looking at it. It's a great point. It makes
10 me shiver, too, just --

11 (Laughter.)

12 MR. ANTON: Maybe in response to that, I
13 mean, if at the same time it's not just only reorganized
14 but also there are major changes to be made, maybe it
15 shouldn't be 10 CFR 72. Maybe then it should have a new
16 number to distinguish it from the existing one, if it's
17 really such a different version then.

18 FACILITATOR LESLIE: Thank you. Other
19 questions, comments?

20 MR. NICHOL: Marc Nichol, NEI, again. I was
21 looking back through some of my notes, and I think if
22 you go to slide 7, you list some requirements for
23 considering maybe doing some slight changes or
24 clarifications. We just identify a couple of other
25 specific regulations that may have small changes that

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1 could be prudent. And I'll try to remember all of them.
2 I have a few written down.

3 One is on 72.236(k)(3), it's a name plate
4 requirement. And we identified that as not really
5 providing any real benefit, so perhaps eliminating that
6 requirement would be beneficial. And, again, we're
7 thinking of addressing this through some of our
8 -- sending this formally to the NRC.

9 Another one that we identified was
10 72.124(c), which had a requirement for criticality
11 monitoring. And we noted that in other areas that the
12 NRC has been able to eliminate the need for criticality
13 monitoring based on other things, such as analyses or
14 something.

15 There was also 72.212(b)(6) that currently
16 requires compliance, a compliance evaluation with the
17 SER, and we noted the NRC had previously made statements
18 that perhaps that's extraneous, so perhaps addressing
19 that regulation as well could be a clean up.

20 And there was one more, and I don't have
21 the regulation written down here, but I think it was
22 in terms of changes to administrative programs. And I
23 believe the way it's written would suggest that you need
24 to come in for prior NRC approval. And perhaps a more
25 appropriate way to do it would be to just allow changes

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1 to those programs under the applicable regulation
2 because they're regulated under other parts by the NRC.
3 So, perhaps that could be an efficiency gain, as well.

4 MS. BANOVA: Okay, I'll try to shout here.
5 Are the mikes picking me up?

6 MR. NICHOL: Yes.

7 MS. BANOVA: Okay. Is this what Brian
8 mentioned earlier, the Part 50 programs, just
9 referencing the Part 50 programs?

10 MR. NICHOL: Yes, 212(b).

11 MS. BANOVA: Okay.

12 MR. NICHOL: And one last thing, it's not
13 on this slide, but it's probably on Slide A-4 for
14 guidance. I just wanted to mention that industry has
15 been working very diligently on updating guidance for
16 implementing 72.48, and we've put a lot of effort into
17 that. And we're getting very close to being able to send
18 a product into the NRC for their review, so I just wanted
19 to let you know that it may fit under this area, as well.

20 FACILITATOR LESLIE: Thanks, Marc.

21 MS. BANOVA: And, Marc, you said very soon.
22 Do you have -- is that like the next few months, or the
23 next --

24 (Laughter.)

25 MR. NICHOL: It would be I would say within

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1 a month, yes. Maybe sooner.

2 FACILITATOR LESLIE: Thank you, Marc.

3 MS. BANOVA: And that's -- and you'll
4 submit that for NRC review and endorsement.

5 MR. NICHOL: Yes.

6 MS. BANOVA: Continued in Reg Guide 3.72.

7 MR. NICHOL: Correct.

8 MS. BANOVA: Okay.

9 FACILITATOR LESLIE: Thank you. I'm going
10 to go to the phones here for a second. Julie, I'm going
11 to give people here in the room a chance to stretch out,
12 think about things, but are there any other comments
13 or questions on the phone at this time?

14 OPERATOR: Once again, to ask a question or
15 make a comment please press *1. I am showing no questions
16 or comments.

17 MS. DAVIS: All right. While we're on the
18 phone topic, I noticed Ray Wharton's name pop up, and
19 I just want to shout out hey, Ray. Glad to see you there.
20 We're looking forward to seeing you back again.

21 MS. BANOVA: Bret, may I ask a clarification
22 question?

23 FACILITATOR LESLIE: Sure. Who are you
24 directing it to?

25 MS. BANOVA: Marc.

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1 FACILITATOR LESLIE: Marc.

2 MS. BANOVA: I'm sorry, Marc. I think one
3 of the specific requirements you mentioned that we may
4 want to tweak, 72.212(b)(6), and that was reviewing the
5 SAR, the cask SAR, and then also the NRC SER. So you're
6 suggesting to remove the requirement for the user, the
7 general licensee to review the SER --

8 MR. NICHOL: Yes.

9 MS. BANOVA: -- towards that cask system.

10 MR. NICHOL: That's right. And maybe Brian
11 could give more information, but I believe it's
12 consistent with some previous NRC's positions and
13 statements. Do you have more info?

14 MR. GUTHERMAN: Yes, I could clarify. Brian
15 Gutherman. That particular requirement says to not just
16 review the SER and FSAR but then to document those
17 reviews in the 212 report. And in the spirit of the SER
18 not being really an enforceable document, the COC is,
19 the FSAR isn't in our view, anyway, anything that ought
20 to be documented in 212 ought to be in the FSAR.

21 So, having said that, certainly general
22 licensees should be looking at the SER and understand
23 what it means, and what it says, because that's an
24 important document for 72.48 programs implementation.
25 But in terms of the 72.212 report, we don't feel that

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1 that is a necessary action. That's for you to decide.

2 FACILITATOR LESLIE: Brian, thanks for the
3 clarification. I think I'm standing in dead zones. Can
4 you guys hear me?

5 (Simultaneous speech.)

6 FACILITATOR LESLIE: I guess I'll just stand
7 here. It'll be a little hard to see who's talking, but
8 our --

9 (Off microphone comment.)

10 FACILITATOR LESLIE: Kris, not to interrupt
11 you but right now the questions are not coming fast and
12 furious. And this is your opportunity to kind of push
13 the audience to the extent that you need to hear more
14 information. You know, thinking back not to just what's
15 in your slides, but also what's in your regulatory
16 information summary, which is available. Is there
17 anything here that you need to hear more on?

18 MS. BANOVA: There is something. So, this
19 wasn't included in the issue summary or in my slides,
20 but I figured I'll ask the question if anybody in the
21 audience has some input.

22 Something that's -- are the mikes picking
23 me up, those in the back? Okay. You know, there's been
24 some discussion in the past about the requirements for
25 the pad design for the general licensees, and these are

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1 the requirements in 72.212(b)(5)(2), and sort of a
2 recognition of a need for maybe some guidance on the
3 pad designs, and the seismic and the structural
4 analyses.

5 I know tomorrow we're going to talk about
6 the inspection improvements. They're making a lot of
7 changes to the inspection manual chapters and inspection
8 procedures to add these different attributes, things
9 for the inspectors to look at when they're out at the
10 sites doing these 72.212 inspections. But I thought to
11 ask that question to see if -- we are planning to update
12 our inspection procedures, but is there a need for any
13 other guidance for industry, or for the cask users, for
14 the general licensees on what needs to be considered
15 for that ISFSI pad design to meet that requirement.

16 So, I know that's come up a couple of times,
17 and I'd just like to throw it out there if anybody has
18 a thought on it at this time.

19 FACILITATOR LESLIE: Kris, thanks for that
20 leading question. You're getting negative nods,
21 although Brian is inching forward.

22 MR. GUTHERMAN: Brian Gutherman. I don't
23 have one in that particular area for pad design, but
24 your remark sparked something in my brain.

25 Many of the COCs, if not all of them, have

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1 a requirement to evaluate hazards on the site, fire and
2 explosion hazards. There's really no guidance out there
3 to do that under the Part 72 umbrella. There's Reg Guide
4 1.90 I think it is; however, there's a lot of confusion
5 out there, I think, among the licensees and your
6 inspectors for what techniques are acceptable for
7 evaluating those hazards; in particular, which hazards
8 are credible, which are not when you're talking about
9 tanks that are passive largely, and containment,
10 explosive liquids. Do they have to assume they just blow
11 up or catch fire, or not? And can they use probabilistic
12 techniques to say yes or no? That would be a very helpful
13 piece of guidance.

14 FACILITATOR LESLIE: Thank you, Brian. Marc?

15 MR. NICHOL: Marc Nichol, NEI. You asked
16 about any potential benefit for guidance on pad design
17 or something like that. And certainly there may be some
18 benefit if NRC were to develop some guidance on what
19 they find acceptable, but I think one area we need to
20 be I think aware of and sensitive to is that -- is how
21 that guidance is developed in terms of what document
22 type it's embodied in, and such that how it's
23 communicated. So, if it were documented into some type
24 of inspector guidance, then we may be very close in the
25 gray area to the line that this type of guidance is

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1 starting to look like standard review plans, in such
2 that we're starting to mix and blur the line between
3 inspection and licensing.

4 And from that perspective, I would instead
5 suggest that a regulatory guide would be a much more
6 effective vehicle. A regulatory guide such that the NRC
7 is developing one acceptable method. It's something that
8 a licensee can go out and use. And, certainly, it
9 provides that communication to the inspectors of what's
10 acceptable.

11 So, if you're looking at developing
12 guidance in pad design, and you may even -- it's been
13 discussed a while back, but some type of stack up
14 analysis guidance, those types of a guidance just to
15 make sure we don't start to blur the line between
16 inspection and licensing may be much better suited for
17 regulatory guides.

18 FACILITATOR LESLIE: Okay, we're got one.

19 MR. SCHRAGE: Yes, this is John Schrage from
20 Exelon, and I would second Marc's statement because
21 since we're the ones who have been subject to all that,
22 I guess confusion. So, I wasn't going to say anything
23 because it looked like you guys were specific to the
24 regulations, but we would endorse a regulatory vehicle
25 for that information, because our engineers are still

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1 struggling with what is going to be acceptable and what
2 is not. Because although it may seem clear to a lot of
3 technical people, it really is not clear. Thanks.

4 FACILITATOR LESLIE: Thank you.

5 MR. TRIPATHI: Bob Tripathi, SFST. Brian,
6 good news for you. There has been efforts already on
7 way to prepare a regulatory guide detailing how to do
8 design ISFSI pad including the solid structure
9 interaction and the whole nine yards. So hang in there,
10 it's on its way. As soon as it's ready it will hit the
11 street. And it's going to be a Reg Guide. If there is
12 a need further for a NUREG we'll follow it up but, of
13 course, Reg Guide would precede that. Okay?

14 MS. BANOVA: Can I put Bob on the spot and
15 ask for a time frame for that?

16 (Laughter.)

17 MR. TRIPATHI: Probably Doug Weaver can
18 answer that question, because I know Gordon Bjorkman
19 has been chartered to work on that particular Reg Guide.
20 When it's going to be done, it's anybody's guess, between
21 now and end of the year I'm hoping.

22 MS. BANOVA: And that came out of the stack
23 up, and --

24 MR. TRIPATHI: Say that again?

25 MS. BANOVA: After the stack up issues

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1 arose, that's --

2 MR. TRIPATHI: Well, yes, there are a number
3 of issues.

4 MR. SCHRAGE: John Schrage from Exelon. That
5 was going to be my next question, that we get the pad
6 but we need the stack up, too.

7 MR. TRIPATHI: Pick a number.

8 FACILITATOR LESLIE: We'll take that into
9 consideration.

10 MR. McCULLUM: And, Bret, this is Rod
11 McCullum. I just want to say for the record since Marc
12 kind of collapsed over here a little bit, that industry
13 applauds that decision to use that process.

14 FACILITATOR LESLIE: Okay. All right. Kris,
15 Mike, other things that you still need to hear?

16 MR. WATERS: Yes, this is Mike. I wanted to
17 follow up on -- you know, I could probably sit here all
18 day talking about each regulation, and we don't have
19 the time to do that. And I need to talk to Kristina,
20 how do we get all the information into the list of things
21 we want to focus on. But Rod brought up the petition
22 for rulemaking engagement, and ask about the timing of
23 our effort, and we'll consider this.

24 I want to make sure we leave as clear as
25 possible on this. To be honest, I don't think suggested

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1 changes to regulations for tech specs was on our radar
2 screen at this juncture, looking planning for the
3 January FRN, although we could possibly consider that.
4 Part of the consideration was a knowledge that you were
5 concerned about rulemaking, I'm very hesitant to say
6 anything that's prohibitive of your rights to submit
7 a petition rulemaking, and that's why we've been caging
8 the pass on that, because anyone has a right to submit
9 with a rulemaking. But as part of the FRN, if you want
10 to make suggestions, Rod, that's being -- maybe
11 something in between then, but I can't commit to that.

12 I would note, we were focused effort on two
13 things. One was the 70.25 NUREG. Complete agreement on
14 that, the standardized tech spec NUREG defines what
15 should be in the tech specs, but not the criteria, reason
16 why. I think some of the fundamental lessons learned,
17 looking backwards, that was based on the technologies
18 a decade ago and the use a decade ago. And it's evolved
19 much more than I had expected, and it's kind of out of
20 date. And new things are tried and approved. The staff
21 wants more tech specs out of a regulatory purview, and
22 it doesn't match up, so I think we still want to focus
23 on the criteria and the reason why it should be a tech
24 spec from perhaps a safety function, and this conformed
25 standpoint. That's something that Bernie had been

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1 working on prior to us assigning, focused heavily on
2 cladding integrity. We've kind of made that NUREG a lower
3 part of the effort to get all these other issues on the
4 table and worked, as well, so I want to leave as clear
5 as possible where we stand on that, as well.

6 FACILITATOR LESLIE: So, are you guys clear?

7 MR. McCULLUM: Yes. Rod McCullum. That is
8 clear, and all we're asking is at the end of the day
9 the decision is made to revise the rule, that it be
10 done in a holistic manner. Because what we're both
11 shooting for here is something that is more efficient,
12 more effective. I mean, going back to the risk-informing
13 discussion earlier today, we've learned a lot over
14 loading 1,500 casks and licensing those 1,500 casks.
15 And it is time to take a holistic look about okay -- and
16 we've got a lot of work in front of us, everything from
17 extended storage on. So, as we're proceeding into that
18 thicker forest, we want to make sure our saw is as sharp
19 as it needs to be. So, let's take a holistic look, let's
20 look at all the inputs here and come out with a rule
21 that assures safety in the most effective manner
22 possible.

23 FACILITATOR LESLIE: Thank you, Rod.

24 MR. WATERS: I have a few other questions.
25 Now, the thing to backfit, well, that's a good one. That

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1 wasn't really on our radar screen per se, and should
2 be considered, as well.

3 Here's an interesting question I have. If
4 it should apply to COC holders, how will you have this
5 framework where each COC stands alone, how is that meshed
6 together. When we issue a new COC the framework, a lot
7 of it's based on standalone COC new system, and by that
8 definition backfit doesn't apply already, I would
9 imagine. So, has industry thought that out to any degree?

10 MR. NICHOL: Yes. Marc Nichol from NEI. Yes,
11 well one consideration is when you go from the initial
12 COC to the next amendment there is some specific thing
13 that was changed. So, from that context it should be
14 what is changed is in the purview of what the NRC is
15 evaluating, asking questions on, challenging, making
16 sure that it's appropriate.

17 There are many, many things that haven't
18 changed, and they were previously approved by the NRC.
19 Certainly, NRC positions and guidance moves forward over
20 time, but certainly the backfit is there to say that
21 only in those instances where there's truly a safety
22 challenge that you would go back and look at those. So,
23 the concept is still applicable.

24 Now, you bring up a good question about if
25 each COC stands alone what does that mean? And I think

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1 there's some flexibility in the answer. And, certainly,
2 we would need to get our legal folks involved on both
3 sides to answer that question, but I think there is an
4 area within there that the conclusion could be even
5 though the COC stands alone, only what changes really
6 needs to be looked at and reviewed. The other stuff was
7 previously approved and it still stands, as well.
8 There's no reason to have to go back and look at them.

9 Now, what I would like to add, as well, and
10 I was really saving it for the next session that talks
11 about streamlining COC and amendment process. These
12 --- some of the things that industry is proposing
13 specifically in the criteria for standardized COC, and
14 in the Backfit Rule become much more important if you
15 start to look at a future paradigm where the amendment
16 process is streamlined. And, certainly, I don't want
17 to get too far into discussing that, but if you look
18 at a potential where there's only one current amendment
19 and it's backward compatible, then these types of
20 concepts that we're introducing become really the
21 structure and foundation to allow that type of new
22 paradigm to exist. So, that's primarily some of our
23 focus, but I do acknowledge you have a very good legal
24 question that needs to be answered.

25 MR. WATERS: Yes, and this is Mike. I didn't

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1 mean to put you on the spot with a legal question. I
2 just -- got to be concerned any further, and that's
3 a thing to consider, as well.

4 I have one final comment, and maybe some
5 more time, is we've -- I know Kris and everybody has
6 a systematic step for almost every regulation, and we
7 have identified things that -- potential for
8 improvement, but I think there's some things that are
9 nice to have, or some things are really thorns in the
10 sides of us, or licensees that we want to focus on more.
11 And I just think some things were highlighted.

12 Those that I heard are generally more
13 administrative in nature in terms of implementing the
14 license and the clarity of licensing things. I heard
15 criticality monitoring, but I haven't heard any ideas
16 on more of some of the -- probably with regard to some
17 more fundamental safety, I guess the wrong word, but
18 really to safety.

19 This morning there was a suggestion it
20 should be risk-informed, you risk-inform the
21 regulation. And I'm trying to -- and I kind of count
22 that as a really big task. But to be honest and try to
23 step through the regulation systematically and get
24 feedback at some point, how does the risk-informing part
25 come into play? What should we be doing from that

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1 standpoint given the process we're at?

2 MR. McCULLUM: Well, this is Rod McCullum.
3 And we think that the single most important thing that
4 you could do to risk-inform the regulation would be to
5 standardize the COCs, particularly when you do -- when
6 you see the criteria, we will be specifying or asking
7 that you specify criteria for a level of detail that
8 is indeed appropriate for the risk of dry cask storage.

9 And once you've done that, and then you have
10 a working 72.48 process in conjunction with that, I think
11 it will be apparent that you have -- you've gone a long
12 way towards meeting, if not almost all the way towards
13 meeting the -- what the Apostolakis Task Force has laid
14 out. By getting the right amount of detail in what is
15 under NRC control as opposed to licensee control, and
16 giving the licensees better guidance as to how to manage
17 what is under licensee control, you will indeed have
18 something that is now consistent with the true risk
19 associated with dry cask storage.

20 FACILITATOR LESLIE: Thank you, Rod. And
21 thanks, Mike, for asking a question that had been on
22 the parking lot and bringing it back. It was about the
23 risk-informed performance-based brought up earlier
24 today, and that was useful to clarify for the record.

25 One last time going around the room. NRC

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1 staff, you guys are fine?

2 MR. WATERS: I think we need to talk
3 internally how we get all these ideas in, like I said.
4 And we are really going through each regulation one by
5 one, and based on the 20 years of experience what
6 potential areas. And we need to discuss the best way
7 to get that feedback from everyone out there. Everyone
8 has raised their hand. People raised their hands that
9 have these specific issues. And maybe the Federal
10 Register process in January is the best way to do that,
11 so we want to get the whole conference a list. My personal
12 viewpoint is we can't fix everything at once. We'll have
13 to pick, and choose, and prioritize, and go from there.

14 FACILITATOR LESILIE: Okay. I guess with
15 that and everyone's permission here, we'll break a few
16 minutes early. That will allow us to change and get John
17 Goshen up here. According to the agenda -- oh, too bad
18 I only have the front page of the agenda, we're supposed
19 to take about a 15-minute break, and be back at 3:30.
20 Since we're breaking a little early how about 3:25. So,
21 we'll reconvene at 3:25, incumbent upon you guys to be
22 back in the room around 3:20. Thanks.

23 (Whereupon, the proceedings went off the
24 record at 3:07:34 p.m., and went back on the record at
25 3:25:41 p.m.)

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1 FACILITATOR LESLIE: This is Bret Leslie,
2 the facilitator. We're going to go ahead and get started
3 with the session. I know there's some temperature
4 control issues. For those of us in the back of the room
5 that are cold, feel free to come up here and warm yourself
6 under these nice canon lights. So, I'm fortunate, I can
7 actually walk back and cool off. These guys up here tend
8 to be a little warm. So, I'm serious, if you're too cold,
9 feel free to come up a little closer, and that will work.

10 All right. So, let's check in where we are
11 in this process. This is the last session where we have
12 a staff presentation, and going back to the stakeholder
13 feedback. After that, we're scheduled at 4:30 to go into
14 this wrap-up session. And one of the things to kind of
15 think about, this is coming to the end of the day and
16 it might be a little hard for us to remember what we
17 said in the morning. I've taken some notes and I'll run
18 through that to help remind ourselves, but that will
19 be another time to think about the things you hear in
20 this session and elsewhere. However, if we finish this
21 session early we'll probably go straight into that
22 wrap-up session. There's really no need to keep us here
23 in silence.

24 So, with that I'd like to turn it over and
25 let people know that both John Goshen and Daniel Huang

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1 are up front. John will be giving the presentation. And,
2 John, go ahead.

3 MR. GOSHEN: Thanks, Bret, and thank all of
4 you for being here. And I feel overwhelmed coming at
5 the end of today after hearing all of this great
6 information.

7 I just want to restate a couple of things
8 that have already been stated, of course, by Mike
9 earlier, that what we're -- certainly what I'm doing
10 for the next 10 minutes is not a comprehensive list of
11 items that we're looking at, and that we -- not only
12 did we solicit, we need your feedback, certainly in my
13 area to make this effort successful. The second is that
14 since this is a repeat of what has happened in the past,
15 but want everybody just to revisit the milestones that
16 Kristina had presented earlier today, and we want to
17 assure that those are real milestones and that they're
18 real products that they have to be produced. So, a lot
19 of resources are being devoted to this and, again,
20 appreciate your feedback and assistance in helping us
21 with moving forward.

22 So, a little bit of background. None of this
23 is new, and I don't think anything actually that I'm
24 going to present is also going to be unique. In 1980,
25 10 CFR 72 was initially promulgated. Dry cask storage

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1 technology while under consideration expanded to
2 include dry storage or spent fuel in casks in a storage
3 pad at a reactor site.

4 Okay. One of the major changes into the big
5 1990 revision, okay, Part 72. Of course, that added the
6 general license provisions, established the framework
7 for certifying cask systems, plus Part 50 licensees,
8 Subpart L. Process we use is direct quantum for making
9 process to certify cask systems and subsequent
10 amendments. We'll discuss that further. And then we
11 approved these casks and then listed them, and they're
12 under 10 CFR 72.14. This was really done ultimately as
13 fulfilling a provision in the '82 Nuclear Waste Policy
14 Act.

15 We're now conducting a review, as it says
16 here, and again just to repeat what's stated earlier
17 that review is being done by -- being performed by
18 COMSECY, or it was initiated by COMSECY-10-0007. And
19 not only we are looking at enhancements to efficiency
20 and effectiveness, I would like to add something here
21 that I think in just trying to present the slides or
22 prepare the slides that we may have overlooked. And
23 that's one of my favorite terms from good friend, Eric
24 Benner, and that is clarity. And I think -- and Mike
25 alluded to it earlier, and I think maybe he may have

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1 said some things, but certainly what are the major things
2 that we're trying to achieve here also.

3 So, as we are using more certificates in
4 lieu of site-specific licenses I think it would be an
5 understatement to state that many implementation issues
6 have been identified. Okay. Again, the list that's, in
7 fact, what we have worked very hard to do in coming up
8 with a 10-minute presentation is to reduce this list
9 down to just very, very basic talking points.

10 Okay. Of course, one of the -- but these,
11 we feel, are some of the major issues; and that is
12 definition of what constitutes a new certificate? What
13 changes can be made to the certificate through the
14 amendment process? And as part of that we're going back,
15 and we already have gone back in reviewing the
16 origination of the term technology, and the different
17 types of technologies that were identified in the '82
18 Nuclear Waste Policy Act.

19 Okay. One of the other issues is that we
20 require rulemaking because of the process that we're
21 using for COCs, for major -- excuse me, for minor design
22 and regulatory changes to cask systems. And, of course,
23 we've identified current rulemaking process may not be
24 the most efficient or effective method to make
25 corrections to previously approved certificates or

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1 amendments that are already incorporated in 72.214.

2 So, we're going to explore whether the
3 complete direct final rulemaking process is needed for
4 an amendment that does not alter the technical basis
5 of, and we put in parenthesis (approved technology).
6 And, of course, as previously stated we will have to
7 come to an understanding of exactly what that meant and
8 what it means now.

9 What also we want to determine now if there
10 is flexibility in the current legal framework to conduct
11 the cask certification process in a more efficient and
12 expedited manner. And the key is to reduce the
13 administrative burden on applicants and general users,
14 and NRC staff under the current framework. And in order
15 to do that we're going to have to develop a technical
16 basis to define what is the regulatory basis, or to
17 support what is the regulatory basis of a new certificate
18 or technology versus what constitutes or can constitute
19 an amendment to a certificate. Okay, next slide.

20 Along with that, we want to evaluate the
21 single certificate approach that's used in other
22 regulatory processes at the NRC. And then this approach,
23 subsequent amendments actually supersede existing
24 amendments. So, along with that back in my former life
25 in industry we called that a benchmarking process. We're

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1 looking at the Part 71 regulatory process, the Part 50
2 regulatory process, the processes in high-level waste
3 storage to see -- it's really a benchmarking effort to
4 see what could be incorporated into whatever we do going
5 forward at this point.

6 So, again, this is just a very brief
7 identification as we've seen on how we got to where we
8 are now, and what we see as needing to be improved. And
9 the main key is getting your feedback. So, with that
10 I'd like to turn this back over to Bret.

11 FACILITATOR LESLIE: Thanks, John, for
12 teeing up the topic. I think people have already bitten
13 at the apple a couple of times today and we'll see if
14 we can round out and buff up that apple and make it a
15 little clearer and more to the point so that the staff
16 is clear on what they might need to consider beyond what
17 they've talked about today as they go forward.

18 So, I'll open it up to the floor to see if
19 there are anything -- any additions to what John needs
20 to consider, and what the staff needs to consider. I
21 only see one hand so I'll let that hand --

22 MR. NICHOL: Marc Nichol from Nuclear Energy
23 Institute. And I appreciate your presentation. I thought
24 you had some very good considerations in there. In fact,
25 many of them we in industry have thought about, as well.

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1 And I mentioned earlier, after last year's NRC workshop
2 in July, we went back and started to think about our
3 own areas we might look to improve.

4 This was one of the major areas that we
5 thought could benefit from improvements. In fact, we
6 even looked at perhaps there's some rulemaking mechanism
7 to achieve some of these things. And, specifically, when
8 you look at amendments is there a process that you would
9 not have to go through rulemaking for amendments because
10 the certificate had already been approved. Presumably,
11 there are not major changes to these major -- in terms
12 of your definition of technology.

13 We went back and looked at a -- I believe
14 it was a 2000 or 2001 petition for rulemaking I believe
15 submitted by industry, and it was ultimately denied by
16 the NRC, but it was along this very line trying to remove
17 the rulemaking. And a lot of the argument was based on
18 this technology terminology that was used in the Nuclear
19 Waste Policy Act. Well, the Commission's decision was
20 in part based on the fact that there had to be an
21 opportunity for public participation along the line,
22 so we removed that from our consideration. When we talked
23 earlier about a potential petition for rulemaking we're
24 not including this in that because we don't think that
25 rulemaking would get the improvements in this area. We

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1 think maybe other areas, NRC policy, positions,
2 procedures, things like that might achieve the
3 improvements here.

4 But I just would throw that out that there
5 is some experience, and there has been an attempt here.
6 And you may want to also go back and visit the
7 Commission's statements for denying that petition, as
8 well. We found them very informative.

9 So, when we look at that we thought well,
10 if there has to be an opportunity for public
11 participation what about a hearing process rather than
12 rulemaking process. And we really didn't find that there
13 were significant benefits in schedule to that, so
14 certainly the benefits wouldn't justify the amount of
15 resources to change the rules to accomplish that. So,
16 we've come to the conclusion that perhaps it's not
17 possible to remove this rulemaking.

18 If it is, and we recognize Part 71 COCs don't
19 go through rulemaking, if it is possible that if the
20 Commission were to change its position, then we would
21 be in favor of those. We just didn't see any indication
22 that that might be the case. You look like you want to
23 say something, so I'll pause.

24 MR. GOSHEN: No, actually I shouldn't be
25 saying anything because it's more important to hear what

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1 you have to say, what Bob, and Suzanne, people
2 specifically from the working level at the site. Okay.
3 I'm the other end of it, and so is Kristina. And,
4 basically everybody here is at the working level of the
5 NRC so we know our issues. Okay? We don't understand
6 all of your implementation issues, and we want to get
7 that.

8 MR. NICHOL: Okay. Can I continue?

9 FACILITATOR LESLIE: Sure. Yes, I'm just
10 waiting for other hands to pop up. Okay.

11 MR. NICHOL: So, to get into some specific
12 -- and I think --

13 FACILITATOR LESLIE: So, a couple of more
14 minutes.

15 MR. NICHOL: Okay. You did identify some very
16 specific issues, and you talk about in this amendment
17 process, of course, amendments are lengthy time, so what
18 types of improvements could be made even if we have to
19 go through rulemaking. We came up with some solutions
20 similar to maybe your considerations.

21 One is, if it's not a significant change
22 -- well, let me back up to a higher level. So, you talk
23 about what is -- what would constitute a new COC. And,
24 actually, when we've developed some what we think would
25 be good criteria for a COC, we've defined in there what

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1 might be considered different technologies such that
2 it should be -- it should not be done through an
3 amendment, but rather it would require a new COC. And
4 we came up with criteria for that that's fairly
5 high-level. If you're going from a bolted cask design
6 to a canister-based system, that should go through a
7 new COC.

8 We discussed some things; what if it's just
9 a change in the number of assemblies, if you're going
10 from a 24 to a 32, does that require a new COC or not?
11 And so those are some things we're still discussing.
12 So, those type of high-level things could be put in the
13 criteria for standardized COC to determine whether you
14 need a new COC or not.

15 The other thing is when we look at the
16 rulemaking process for amendments it is quite lengthy
17 because you have the staff safety review followed by
18 the rulemaking. It is quite conceivable that those two
19 could operate in parallel if you could meet some specific
20 screening criteria. And, of course, those criteria
21 aren't developed yet, but what if the criteria was
22 something as general as it is not significantly
23 different from what the NRC has previously approved.
24 And if it meets that criteria, those two processes to
25 go parallel recognizing that if something occurred

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1 during that safety review that the staff could hold a
2 rulemaking and postpone it until the end. So, there could
3 be some schedule efficiency gains in that.

4 And then there's the third type of change
5 which would be something that's very editorial, or maybe
6 even just a correction to the COC. Should that really
7 require an amendment and rulemaking? Perhaps not.
8 Perhaps there's a new process that the NRC could develop
9 that would allow changes, editorial or corrections to
10 the COC tech specs that would not have to go through
11 an amendment and would not have to go through rulemaking.
12 So, I'll leave it at that. I have more ideas, but --

13 FACILITATOR LESLIE: Great. Thanks, Marc.
14 And I'm going to head back to Suzanne. Do you -- give
15 you the opportunity.

16 MS. LEBLANG: Suzanne Leblang from Entergy,
17 and John asked for some input on this so I think Marc
18 kind of touched on it. Probably the correction and the
19 editorial items that we find from time to time sometimes
20 in there, a mechanism for how those can be addressed
21 because they seem to haunt us. And there really is no
22 mechanism for that. And, again probably for those some
23 criteria where they don't have to go through the
24 full-blown rulemaking process, or be tied to an
25 amendment I think would be very beneficial. And the key

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1 would be defining what they are, and that they truly
2 are editorial or correction type items.

3 And then the final slide, the consideration
4 of the single certificate, and that we all use subsequent
5 amendments supersede the previous ones. I do not think
6 that there's widespread buy-in from industry on that.
7 Not everyone was in agreement that that's the best way
8 to go, I guess is what I would say from the industry
9 perspective.

10 It is -- it introduces some very new
11 problems, also. It does, maybe, perhaps help correct
12 some, and there might be a way that that could be done,
13 but it needs to really be looked at, especially in the
14 aspect of what is the time frame that you would have
15 to then implement to that.

16 FACILITATOR LESLIE: John, do you want to
17 make any clarifying --

18 MR. GOSHEN: I was going to say that I'd like
19 to reiterate what's already been stated before I think
20 by predecessors that it's not our intent to create new
21 requirements or new burden. It's specifically the
22 opposite. Our intent is to maintain current level of
23 safety which is high, and rigor. But specifically reduce
24 by streamlining and other things, clarifying really the
25 administrative burden. This is what we call the software

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1 part of implementing the rule.

2 And really all things are on the table, so
3 if that process -- if the single certificate approach,
4 for instance, we adopted we would have to, of course,
5 look at insuring that we wouldn't mistakenly backfit
6 specific sites. There are all sorts of considerations
7 that would have to apply.

8 Again, you're talking about the industry
9 is -- has some concerns with going to that approach.
10 By the same token, we have concerns on our part with
11 implementing the approach as it stands now. So, we're
12 going to have to come to a -- yes?

13 FACILITATOR LESLIE: We'll come back to you,
14 and we'll get your -- and, Suzanne, I'll point something
15 for you. If you can be specific on what types of things
16 you perceive could be problems in the future, that's
17 going to help them, as well. I'll let you think about
18 that.

19 MR. ANTON: Okay. This is Stefan Alton from
20 Holtec International. I just want to share a little bit
21 of an experience on the -- in the area of new COC, because
22 although that would appear straightforward if you think
23 about it, define the technology and things like this.
24 The fact is it can be much more complicated because
25 nowadays we're not dealing with kind of monolithic

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1 systems. We have systems with an overpack, and MPCs,
2 and transfer casks and things like this. And we had some
3 experience. Of course, John knows what I'm talking
4 about. And I just want to highlight here the problems
5 in there.

6 We have one of our storage systems we
7 introduced at some point in time in the past with very
8 different overpack systems, but all the MPCs stayed the
9 same. At that point in time we convinced the NRC that
10 it would remain in the same COC. I know that was kind
11 of agreed but hesitantly by the NRC, and we understand,
12 there were lots of discussion on this. So, we did it
13 this way.

14 And just not too long ago, we want -- we
15 did the same thing, but this time we decided since there
16 was so much hesitation previously, we decided to put
17 that into a new COC. But now we wanted to -- the idea
18 was that you don't duplicate everything because large
19 parts of your COC, everything that deals with the MPC,
20 because with the multipurpose canister and things like
21 this remains the same. And that turned out to be
22 -- resulted in the end in a lot of duplication of things.

23 So, these systems that are old nowadays,
24 if their pieces, parts are used between different
25 systems that can make it even more complicated in

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1 defining what a new system is, or what should still go
2 in as a license amendment. And I just wanted to offer
3 that as an experience. I don't think -- that probably
4 should also be considered whether there is a clear idea
5 in that respect, and maybe there's a better solution
6 for that than we found there.

7 FACILITATOR LESLIE: Thank you, Stefan. Are
8 you ready, Suzanne? Thanks, appreciate it.

9 MS. LEBLANG: Suzanne Leblang from Entergy,
10 again. Okay. So, some specific examples of how this
11 single amendment would need to be addressed, or what
12 we see as issues. When I get ready to buy or order a
13 cask, I have somewhere between an 18-month and two-year
14 lead time. When I do that, I have to specify what
15 amendment I want to buy that cask to.

16 Now, that's not to say that later on when
17 it comes, or if there's an amendment issued in that 18
18 months that I can't get the vendor to recertify that
19 or change what it's built to, but it causes some problems
20 in our contract space, and also work for the vendor.
21 And we're also charged a lot of times for that to be
22 changed for it to be built to. So, if I'm forced to have
23 to use some new amendment that has come out, I have to
24 go back and get that all changed in what I ordered in
25 my contract space, and what my vendor built and certified

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1 it to.

2 The next one is I'm imminently ready to
3 load. I've updated my 72.12. I'm three weeks away from
4 a loading campaign. Everything is all ready to load to
5 amendment 5, and amendment 6 is issued. It can be
6 addressed again with a time frame specification, but
7 it's something that needs to be thought about.

8 And the next one is sites that perhaps load
9 once every five years. There are some people that decide
10 that they would like to wait five years in between
11 loading campaigns, and then they conduct very large
12 loading campaigns of perhaps 10 casks. If there's I'll
13 say a more restrictive time frame specified for them,
14 they possibly could have to be going back and updating
15 their 212 and everything that they're saying that
16 they're loading to for amendments in between that
17 they're actually not loading anything to. Whereas, right
18 now they would wait and update once for all those
19 amendments that have subsequently been issued in between
20 there. So, those are some specifics.

21 FACILITATOR LESLIE: I really appreciate
22 that. That helps me, as well, get some understanding
23 of the complexity. Go ahead, Brian.

24 MR. GUTHERMAN: This is Brian Gutherman.
25 Everything Suzanne said is absolutely right, so that

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1 this needs to be done with great care. I'll offer some
2 more practical experience-based remarks in the same
3 vein; that the support of an effort like this, not just
4 for the certificates but for the FSARs.

5 I have a customer, for example, that's going
6 to be reaching the fourth different amendment of the
7 same Certificate of Compliance, and he will have the
8 fourth FSAR applicable because in practice the FSARs
9 are not as updated. They are unique, and as information
10 in the certificates gets changed or replaced those FSARs
11 delete that information in the next revision. So, think
12 about a couple of things here.

13 The 72.48 program, of course, is founded
14 on the FSAR. There's four versions of it out there. None
15 of them may be the latest one that the COC holder is
16 working to against which the COC holder writes all of
17 their 72.48s, so how they apply the prior revisions is
18 a big mystery. So, this is quite a Rube Goldberg
19 situation right now that would benefit -- again, with
20 due care to all the different parties that have to deal
21 with this, and no unintended consequences. It's going
22 to take some table topping and some what if'ing, I think,
23 but it's a very worthwhile effort.

24 FACILITATOR LESLIE: Okay. Thank you, Brian.

25 Marc?

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1 MR. NICHOL: Marc Nichol, NEI. I wanted to
2 make a comment on a different aspect and then go back
3 to the discussion here. One thing to consider is that
4 the complexity in all of these amendments could be
5 greatly diminished if we just had fewer amendments. And
6 how is that accomplished, how are there fewer
7 amendments?

8 And industry has come up with the answer
9 that the COCs have details in them that are not directly
10 related to insuring safety, such that if those details
11 could be removed then there -- if they were to change
12 they would not require amendments to change. And that's
13 specifically in our thinking when we've developed this
14 standardized COC criteria.

15 And I'll give an example. A lot of times
16 amendments are due to fuel type changes or fuel contents.
17 Now, certainly appropriate within the COC would be
18 burn-up, enrichment, decay time curves, but do you
19 really need all of the dimensions of the fuel, such that
20 you have pages, and pages, and pages of the dimensions
21 of the fuel. And if you wanted to add a new fuel type
22 that's almost identical but it's off by .001 centimeters
23 and one dimension, that you need an amendment to do that.
24 That's not very efficient for I don't think anybody.
25 So, really make sure that the right stuff is in the

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1 amendment -- is in the COC is going to reduce the need
2 for amendment. So that, I believe, is going to be a huge
3 efficiency gain.

4 Now, going to the point of a single active
5 amendment. I believe there is potential value in getting
6 to that new paradigm. I believe the challenge is how
7 you get to that new paradigm, and the details of what
8 that new paradigm would be. And Brian and Suzanne
9 mentioned some challenges.

10 One thing I'd like to mention is -- in terms
11 of my thoughts on what a new paradigm might look like
12 is certainly the next amendment would have to be
13 backward compatible, so that when you go to amendment
14 2, it is all-encompassing of the original, amendment
15 zero, amendment 1. And if we think of backward
16 compatibility no longer I don't think we should be
17 discussing is that cask an amendment zero, amendment
18 one cask. We're looking at subtype. We call it a subtype,
19 so it is this type which is that COC, and it's subtype
20 zero, or subtype 1, or whatever letter designation that
21 the COC holder wants to give it.

22 And that's a key consideration because a
23 lot of what Suzanne was hitting on is the ability to
24 be able to use the subtype from amendment 1, even though
25 the COC has gone through amendment 2. And if she can

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1 -- if the general licensee can continue to use that
2 subtype, then that would avoid a lot of these issues.
3 So, being able to use the cask subtypes in previous
4 amendments, even though we're on a much, much later
5 amendment is essential to a successful future paradigm.

6 The other thing to consider in that future
7 paradigm, and Suzanne hit on this, as well, how do the
8 general licensees incorporate that into the world of
9 72.212 and complying with the COC. And maybe it was one
10 amendment when they've written their 212, but a
11 different amendment now. How is that handled? And
12 perhaps there are ways to get through that. Perhaps it's
13 just referencing the COC as most recently approved, or
14 doing some generic reference to the COC, or just
15 referencing the COC.

16 I don't know. Those are some very -- those
17 are some details in the administration that really need
18 to be worked out. And then, of course, when we look at
19 the details of how do we get from where we are to where
20 we would want to be, we really have to consider what
21 would be the impact of backfitting some -- this single
22 amendment to what already exists. And perhaps the way
23 to avoid that is to provide some grandfathering, so
24 instead the amendments that are already active the way
25 they are would continue to be so. And it would only be

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1 new COCs that would meet this new type of paradigm, or
2 the COCs once they come up to the next amendment would
3 then need to meet -- they would need to go through the
4 exercise of becoming backward compatible; although,
5 that would be quite a burden on some.

6 So, those are some considerations there.
7 I'll let other people talk before I get more ideas.

8 FACILITATOR LESLIE: I've got a question for
9 you. I've got another hat. I'm not a facilitator all
10 the time, but this paradigm shift that you're talking
11 about is that -- would that require a rulemaking?

12 MR. NICHOL: No, and that's the thought I
13 wanted to wait until later. But we don't think that that
14 would require a rulemaking. We think it's within the
15 NRC's purview of either policy, or could just be
16 procedural.

17 I don't know exactly the history of where
18 the determination came from that the casks were approved
19 each next amendment. I don't think it's in the
20 regulations. I think it was an NRC internal decision
21 that that's the process they wanted to use. So, I believe
22 the NRC would have it within their capability to redefine
23 that process themselves.

24 FACILITATOR LESLIE: John or Mike?

25 MR. GUTHERMAN: Yes, can I say this. It's

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1 interesting, Marc, and I haven't talked to you about
2 any of this, but the subpart of the amendment you were
3 talking about, actually several of us have thought about
4 it independently exactly as you have described it.

5 I think the reason for that is that, again,
6 I mean, what we're doing -- and go back. Okay, just let
7 me say this. What we were challenged -- what Dan and
8 I were challenged, and before us, Michelle Samson and
9 her Lean Six Sigma many were challenged to do was to
10 put the blinders on, forget everything that you know
11 at this point, go back to the beginning and figure out,
12 or try to figure out what was the exact intent of the
13 general certificate process, where it came from, the
14 histrionics. Go back and find all the documents that
15 led to what actually happened in 1990. And then after
16 you look at that, then look at the 1990 rule and go back
17 to the beginning again.

18 And I'd like to challenge everybody who has
19 a stake in this to go back and do the same thing, because
20 when Dan and I did it, we came up with some really
21 interesting concepts, or really interesting facts, and
22 what you just identified there is one of them.

23 But let me say this. On the single
24 certificate approach, I don't think either we nor the
25 industry have a process in place to insure that these

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1 types of minor changes that could be done outside of
2 an amendment are actually incorporated by the applicable
3 users out in the field. And that's something else that
4 we have to look at.

5 And, again, I look at okay, what we're
6 talking about here, so they're very similar to Part 71,
7 but in that case we did have a process to make sure
8 they're incorporated, and that is we have a general -- we
9 have a user's list. We have a certified user's list.
10 Right? So, those are some of the things that we'd like
11 to look at. That could be an idea. Right?

12 MR. WATERS: Can I add --

13 FACILITATOR LESLIE: Yes, sure, Mike.

14 MR. WATERS: Actually, it's a good
15 transition. I had the same question. You look at the
16 major cask designs right now, TransNuclear, Holtec, NEC,
17 InterSolutions, they have multiple amendments for
18 storage, on the transportation side, the dual purpose
19 side there's a similar certificate that supersedes each
20 time they come in for an amendment. That seems to be
21 able to be maintained when the vendors come in to have
22 an amendment change on the transportation side, and
23 I hesitate to ask the question that maybe I don't know
24 the answer to, but how is it workable under Part 71 to
25 be able to have common cask deployments, the fuel and

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1 the canister were usually a common component defined
2 in Part 71 certificate, how are we able to maintain a
3 single certificate for Part 71, whether there's a burden
4 -- and I'm not -- I guess I am challenging -- it is a
5 burden to have -- to do that for storage.

6 MR. NICHOL: I can offer one item. This is
7 for Part 71, once the package is shipped, it's gone.
8 There's no ongoing requirements or surveillances after
9 that point in time. That's the first one that jumps to
10 my mind.

11 FACILITATOR LESLIE: Okay, got someone in
12 the back.

13 MR. ANTON: This is Stefan Anton from Holtec,
14 and I think another part of the answer is there isn't
15 really not much shipping being done right now. I think
16 if there would be so many shippers as storage casks then
17 you would get an enormous of license amendment there,
18 as well. So, it would then be a challenge in that area,
19 too.

20 FACILITATOR LESLIE: Okay. Other questions
21 or comments?

22 I guess the reason why I asked that
23 rulemaking point is, one of my other jobs to support
24 these guys is in rulemaking space. And I think most
25 people are aware that the cumulative effects of

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1 regulation, the Commission has weighed in on that. And
2 there are some questions that directly go to
3 implementation. And that may be relevant as you guys
4 think about this approach, that may help you clarify
5 and sharpen your pencil. In particular, it's the SRM
6 to SECY-11-0037. And then, also, on May 30th, public
7 meeting, the slides there list the questions that are
8 -- staff are considering for all new rulemakings, in
9 particular talking about implementation issues. So, I'd
10 just offer that out as something else that staff and/or
11 the stakeholders could look at to see if it could sharpen
12 the considerations as you guys go forward.

13 Questions or comments here? Go ahead, Mike.

14 MR. WATERS: Yes, this is one -- maybe keep
15 the debate -- keep the discussion going on, going to
16 a single certificate. Is the view the challenge more
17 of getting multiple certificate versions into one
18 certificate, or the other idea of going to a single FSAR
19 that captures everything? Is it one or the other, is
20 it both, or are we --

21 MR. NICHOL: Well, I think when you look at
22 --- if you look at the -- what is it, the historical
23 perspective or the legacy, if you look at the legacy
24 it's going to be a challenge no matter what. That's why
25 I talk about having it grandfathered. But if you look

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1 at future COCs, then I think perhaps yes, there may be
2 additional work that needs to be done, but perhaps the
3 value of doing that far outweighs the necessary work.
4 So, yes, you would need -- and I would suggest rather
5 than call it supersede previous amendments, I would say
6 encompass previous amendments, or something that gives
7 the context that it's backward compatible.

8 But it can be done, in the COCs and in the
9 FSARs it can be done. And I think it's through this
10 concept of looking at them as subtypes rather than
11 amendment models. It's a subtype model, and you have
12 a -- the subtype models would continue to grow as you
13 have more amendments. So, the first amendment may have
14 one or two subtype models. By the time you get to
15 amendment 10 you may have 12 subtype models, not really
16 sure. And they may be different baskets or something
17 like that, or different overpacks, even.

18 FACILITATOR LESLIE: And that was Marc
19 Nichol, NEI. Daniel?

20 MR. HUANG: Yes. Marc, I think what you're
21 suggesting is say maybe you have amendment 2, and then
22 you have revision 1, 2, 3, 4. Right? I mean, that's the
23 subtype you're talking about. You have one amendment
24 -- I mean, you have a different amendment under COC.
25 You still have different amendments, but under each

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1 amendment you would have different revision. Is that
2 what you're --

3 MR. NICHOL: Yes, you'd have a different
4 revision, but I guess I'm trying to decouple this concept
5 of amendment tied to a cask, a physical cask type.
6 Because really an amendment can do one of two things.
7 It can introduce the new cask subtype, so if you go to
8 amendment 4 or 5, you could be introducing a new cask
9 subtype. Maybe it's a different basket design, or
10 different fuel because of the basket design, or what
11 you could be doing is modifying a previous cask subtype.

12 So, what you get into if you have these
13 multiple active amendments, if you want to make the same
14 change to all of the cask subtypes, you may have to do
15 multiple amendments. But if you have a single active
16 amendment, you could make a change to all of the
17 subtypes. So not necessarily every amendment introduces
18 a new cask subtype, so it's really -- we need to think
19 about how we refer to these cask subtypes differently.

20 FACILITATOR LESLIE: John, go ahead.

21 MR. GOSHEN: Yes. And, again, going back to
22 the future in 1985 it was actually a good point, it was
23 at that time frame to do that also, because that's about
24 when the discussion started, and the initial document
25 started.

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1 And, again, I don't want to dissuade or
2 persuade anybody. This is my opinion, but I think what
3 we found out when we went back and performed that review
4 was that, first of all, the concept was -- and if you
5 look at the initial Statements of Consideration are
6 that -- well, first of all is that Yucca Mountain would
7 be operable in 2008. Okay? All right? First thing.

8 Second thing, okay, we've got a
9 certificate, and then we will have a 72.48 process to
10 take care of any minor revisions that might be needed,
11 and then we will have an amendment process for specific
12 sites that needed to have additional provisions that
13 the applicant -- that weren't in the original
14 certificate. And if anybody can find any more discussion
15 about what was supposed to be an amendment other than
16 that, we would really like to know about it. Okay? I
17 mean, just from -- not that it's keeping us up at night,
18 but I think that these are the types of things you have
19 to go back. Okay, well, I think -- okay, we have an
20 evolving, maturing program now that nobody expected in
21 1985. And there's going to be advantages and
22 disadvantages of doing anything.

23 Again, it is not our desire to increase
24 regulatory burden, or administrative burden. And this
25 whole discussion is not about improving safety, the

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1 safety is already there. Yes?

2 MR. GUTHERMAN: This is Brian Gutherman. I'm
3 going to back to Mike's original question. I think the
4 answer is both, Mike. And I'm going to channel Brian
5 Gutherman's from a prior meeting. If you talk about this
6 amendment and FSAR and different versions thereto with
7 licensed operators their heads spin around. They're used
8 to a license, and a set of tech specs, and FSAR as latest
9 update. And it's very difficult for those people that
10 are in the control room and somebody said this canister
11 did something it's not supposed to do, they don't know
12 what to do. And it would be a great burden reduction
13 effort for them in training, and of course the 72.48
14 program, the ones I spoke to.

15 FACILITATOR LESLIE: Thanks.

16 MR. WATERS: And that's my point in kind of
17 going to -- and a practical standpoint I see the same
18 thing. When I go to John's desk or Jennifer's desk and
19 see a long set of FSARs, and then they tell me well
20 there's eight pieces of certificate that apply to them,
21 and by the way, there may be 72.48s and different SAR
22 versions out there, the traceability becomes a nightmare
23 just from that standpoint. And I asked -- I go back to
24 under a new paradigm we'll have more amendments coming
25 down the road, longer store -- do we still want to

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1 operate this way, or is conversion to a single
2 certificate with grandfathering. I think that has to
3 be done somehow, and/or FSAR is that initial investment,
4 what the -- and the long-term of value you're looking
5 at the next 20 years of licensing certification.

6 My personal view, again, as John's personal
7 view it is, I mean, when you go to transportation, much,
8 much easier for traceability and processing a change.

9 MR. NICHOL: Yes. Marc Nichol, NEI. And I
10 think you hit on a key concept, is the configuration
11 control, and the amount of resources it starts to require
12 to maintain that configuration control. And we're at
13 a point now, you know, 1985 was almost 30 years ago,
14 what is it going to look like in 30 years from now? And
15 I think that's exactly what you're trying to address,
16 is looking out into the future, how difficult it is now,
17 how much more difficult it might be in the future.

18 Let's look at this and see if we can find
19 a more streamlined approach. And we're on board with
20 that. We would like to find a more streamlined approach
21 to that, too. I think our main message is that we see
22 value in a single active amendment. We think that that
23 single active amendment could have a single active FSAR.

24 The real challenge is going to be in
25 defining those details. So, yes, we agree that there's

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1 potential value there, that we should continue to
2 explore it, but we probably need more time, maybe not
3 necessarily time, but more discussion to really consider
4 what are the details that could hang us up and prevent
5 us from achieving those efficiencies. And how do we
6 overcome those challenges. So, I think we should move
7 forward and we should continue the discussion on this.

8 FACILITATOR LESLIE: Thank you, Marc. I'm
9 going to go to the phones and let people think about
10 what they've heard so far. So, Julie, are there any
11 questions from the remote participants?

12 OPERATOR: Once again, to ask a question
13 please press *1. One moment. I am showing no questions,
14 sir.

15 FACILITATOR LESLIE: Okay. Well, just to let
16 people know, that there have been up to 17 people on
17 the line as we've gone through the meeting. They've come
18 in and out, so it's not that -- although they're silent,
19 they may be getting some good information and providing
20 that to the NRC in the future. So, don't think it's been
21 a wasted resource. That's for sure.

22 So, other comments or questions on this
23 session? And, again, I'm going to also kind of poke the
24 NRC. This is your meeting, and if there are any other
25 leading questions that can provoke the participants who

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1 are now starting to get tired. Oh, oh, that was enough.

2 MS. LEBLANG: I have one, something minor.

3 FACILITATOR LESLIE: No problem.

4 MS. LEBLANG: Suzanne Leblang from Entergy.

5 And one other thing that we probably should consider
6 when we talk about the single amendment was something
7 that came up at a meeting about a month ago, is when
8 we look at issuing the license renewals, how do we
9 address all those existing amendments and/or FSAR
10 revisions, and what are we going to do with that?

11 I think we already brought up that that was
12 something we need to look at, but as we look at
13 progressing through this, let us not forget that one.

14 FACILITATOR LESLIE: Thank you, Suzanne. All
15 right.

16 MR. GOSHEN: Marc, the -- I think we would
17 be glad to have more meetings. I mean, I'll speak for
18 myself but the others -- you know, there's already
19 initiatives that you're working with Steve Ruffin,
20 whatever. I don't know how we want to handle this. I
21 know if I just keep looking, just to remind myself,
22 again, I keep looking at these milestones, and it's
23 already two-thirds of the way almost through 2012, 2013
24 to '14 develop recommendations. And if you look at where
25 we -- when did Lean Six Sigma finally submit their

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1 recommendations? Was that 2009 or '10?

2 MS. DAVIS: '10.

3 FACILITATOR LESLIE: 2010.

4 MR. GOSHEN: Okay. Well, that was two years
5 ago, this is less than two. I'm just saying, you know,
6 it's time to --

7 MR. NICHOL: Yes. Marc Nichol, NEI. I agree,
8 and we would be very supportive of having meetings, more
9 discussions on this defining what it would look like,
10 defining the challenges and how we can overcome those,
11 because I think you're right. When you go back and look
12 at the 1990, it could have come out very differently.
13 The NRC internally, and I don't know where that decision
14 was made, maybe it was your legal department, but they
15 could have very well come out with a determination that
16 each amendment becomes the active amendment, and it's
17 backward compatible. So, you know, I don't think there's
18 a regulation that define the paradigm we're in now. It
19 could have been very different.

20 FACILITATOR LESLIE: Thanks, Marc.

21 MR. HAUGHNEY: Charley Haughney. Speaking
22 of 1990 --

23 (Laughter.)

24 MR. HAUGHNEY: There was very little
25 discussion of amendments in that time frame. I think

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1 we on both sides of the aisle were all optimistic and
2 naive thinking we'd probably almost never need one. And
3 there was a lot of press to get different designs
4 certified so that fuel loading campaigns could take
5 place. Some people were really up against the blocks
6 on being able to maintain full core reserve.

7 There was some informal discussion among
8 NMSS and the legal staff about gee, if we need an
9 amendment, how are we going to do it? And that discussion
10 never really went full course. But the notion was, and
11 this is informal, I don't think you'll find it anywhere,
12 we really kind of need the rulemaking because that's
13 the only way we'll keep the public input resolution
14 alive. And at that same time the whole general license
15 provision was undergoing litigation in the Sixth
16 Circuit, and it went all the way to the Supreme Court,
17 where the Michigan Attorney General wanted to throw out
18 the whole general licensing regime and have only
19 site-specific licenses with hearings.

20 Well, we won that, but I think we were all
21 --- I mean, I recall colleagues I think at the time were
22 sensitive to the fact that we needed to maintain the
23 public access, and maintain kind of a pristine
24 rulemaking approval process. So, that was then, this
25 is now. Obviously, having to figure out which set of

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1 amendments apply when you're shift supervisor at 2:00
2 in the morning, and the other unit is still operating.
3 We just don't want to confuse those people.

4 FACILITATOR LESLIE: Go ahead, John.

5 MR. GOSHEN: Great. Thank you, Charley.
6 Could I ask a question. In your discussions of that
7 because, again, going back to 10 CFR 2.1103 and 2.1007,
8 okay, which sounds like incorporated some of that legal
9 language, what did you determine would actually
10 constitute an amendment?

11 MR. HAUGHNEY: I don't recall that we ever
12 really discussed that.

13 MR. GOSHEN: Right. And it's never in any
14 of the Statements of Consideration. That's right.

15 MR. HAUGHNEY: Yes, I wouldn't be surprised.

16 MR. GOSHEN: Which -- okay.

17 MR. HAUGHNEY: And I'm thinking here today,
18 I don't have a key to this problem that I can offer,
19 at least today. It's a toughie.

20 MR. GOSHEN: Okay. Second question, was
21 there any discussion in that process of tying it back
22 to what actually was a technology as defined and used
23 in the Nuclear Waste Policy Act?

24 MR. HAUGHNEY: No, not -- I can't a recall
25 a discussion of that term and its significance in a

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1 meeting ever coming up at all.

2 MR. GOSHEN: Because what it says in NWPA
3 is it identifies two types of technologies, dry waste
4 storage and wet storage, and it implied that a general
5 program should be developed for using that. And that's
6 it.

7 MR. HAUGHNEY: Okay.

8 MR. GOSHEN: So, we -- I bet, though -- I
9 bet in your discussions, though, the fact that there
10 was only going to be a 17-year or 18-year use program,
11 and that this was only going to be about 200 at the most
12 canisters. Right?

13 MR. HAUGHNEY: Well, maybe a couple of
14 thousand max.

15 MR. GOSHEN: Well, okay. We're not --

16 MR. HAUGHNEY: We're going to pass that
17 soon.

18 MR. GOSHEN: What amendment on -- what, 13?

19 MR. HAUGHNEY: Right.

20 FACILITATOR LESLIE: Thank you, Charley.
21 Mike, John, any final comments or thoughts about this
22 session?

23 MR. WATERS: No, I think Charley is probably
24 right. I think I actually hired him so I can't disagree
25 with him, but I really believe if you look at all the

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1 history, and I wasn't here, but I think the idea was
2 the general license process was much more simple, buy
3 the cask off the shelf. That's about how I started, you
4 know, just a cask to be buying load, and the idea of
5 tailoring casks to specific site needs, need for
6 amendments, obviously, that never occurred to people
7 who wrote the framework. When we were going to
8 make tough decisions when the first amendment request
9 came in, we had probably utilities that needed to
10 maintain operations and had to have this cask design,
11 so with maybe a cautious, conservative, pristine
12 approach and it's just kind of expanded over the past
13 few decades. And do we want to continue this, and on
14 what -- I think we'll have to have some sort of
15 rulemaking and public participation. We're not going
16 to eliminate that, but there should be a much more
17 efficient way to do this, looking at how we certify
18 everything at the Agency.

19 FACILITATOR LESILIE: Okay. Thanks, Mike.

20 Any final comments?

21 MR. McCULLUM: Well, yes, I'll make --

22 FACILITATOR LESLIE: Rod?

23 MR. McCULLUM: Echoing what -- this is Rod
24 McCullum, of course, of NEI. Echoing what Mike just said,
25 and we've looked at this. We debated this very carefully

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1 when we were looking for a petition for rulemaking for
2 standardized tech specs. And the idea well, should we
3 also try to do a different process other than the
4 rulemaking. And we looked back and what had been done
5 and saw how that ran aground in 1990.

6 So, what we came to was we really -- in terms
7 of there ought to be an easier way to do it, we accomplish
8 that goal if we get the criteria for what goes into COC
9 right, so that the level of detail of information that
10 is requiring at the regulatory interface is not
11 excessive; therefore, instead of streamlining the
12 process you do a lot of amendments. Let's fix this so
13 we don't have to do unnecessary amendments. It's
14 something that's at a level of detail that should be
15 below the COC doesn't have to -- when it changes it's
16 a 72.48. It doesn't have to kick off an amendment.

17 So, making -- you can have an unnecessarily
18 high number of amendments. You can make every one of
19 them happen more efficiently, spin the wheel faster,
20 or you can step back and say let's not have as many
21 amendments. And we feel that that will accomplish that
22 goal.

23 And I think that's an excellent transition
24 to what I wanted to say in the way of closing here, which
25 is first of all to thank NRC. This has been an outstanding

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1 discussion. Bret, you deserve credit for being on your
2 feet and holding a microphone all day. It's not as easy
3 as it looks. I understand that, and we thank you.

4 I want to go back to Slide 6 of the Kris
5 and Mike presentation. And it doesn't have to come up
6 there. The third bullet I'll read again, "Experiences
7 demonstrate" -- this is the new paradigm slide.
8 "Experiences demonstrate if the safety provided within
9 the current regulatory framework but has also indicated
10 opportunities for improved integration, efficiency, and
11 effectiveness."

12 This is something we feel very strongly
13 about, and there is the slide. Indeed, we do need to
14 improve the efficiency and effectiveness of the
15 regulatory framework. We have a great base of
16 experience, and Brian just pointed out we're now up to
17 1,600 casks, all safe. And we can build on that
18 experience.

19 I think what we've got here in this meeting
20 is a strong sense of alignment that we should take
21 advantage of these opportunities. Now, we still have
22 some discussion as to which opportunities to take
23 advantage of, and how to best take advantage of those
24 opportunities. But all opportunities come with a
25 characteristic that is best summarized in the old adage,

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1 "He who hesitates is lost."

2 You know, we are moving into a more
3 challenging world. We are going to see staff's plan to
4 address waste confidence very soon. We're going to have
5 to address extended storage. It's not just it would be
6 nice to become more efficient, we have to become more
7 efficient because to function in the more challenging
8 world and continue to meet the same high standards of
9 safety, we need to use our resources smartly. And this
10 is one of these cases where you heard us press you guys
11 on time frames a couple of times, and turn about is fair
12 play. You pressed us on time frames.

13 We need to move ahead briskly, get this in
14 place now while the opportunities are in front of us.
15 So, as we move into the new paradigm we're ready, and
16 we can meet the challenges of extended storage and
17 everything else we're going to face. So, I look forward
18 to continuing the dialogue, NEI and industry, we have
19 a strong turnout here, and from industry. We'll continue
20 to get that. As fast as you guys can run, we'll be right
21 alongside you. And we want to get these improvements
22 in place, and look forward to it. Thanks.

23 FACILITATOR LESLIE: Thank you, Rod. Mike,
24 did you have a summary slide, because I'm going to go
25 through a few things that I've heard, and go through

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1 the parking lot first. I didn't know if you had any
2 summary comments, as well, that you wanted to provide.
3 If so, I'm giving you a head's up to --

4 MR. WATERS: No, I wanted to at some put up
5 the Success Slide and look at that again.

6 FACILITATOR LESLIE: Okay. Well, we'll get
7 to that in a second. So, a couple of things that I did
8 today is trying to put some ideas and thoughts that I
9 heard in terms of the parking lot. It was one of the
10 things that was brought up and was addressed right after
11 lunch, which is what is this path forward? What are our
12 opportunities? We heard right there again in Rod's final
13 comment that they're looking forward to running with
14 us, or running with the NRC to move this along. So, again,
15 Mike when you summarize if you could go back and remind
16 folks what the next opportunities are when you describe
17 what success is.

18 One of the things we heard in the morning
19 session, and it came back around, is this idea of
20 risk-informing and performance-based as you look
21 forward in terms of things. And I think at one point
22 in time Rod brought this back to bear to the information
23 that Kris was talking about. So, it did come back into
24 the discussion, so that one got taken care of.

25 And appreciate the real examples like

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1 Charley and Suzanne of specificity that this type of
2 feedback really helps the staff to understand where they
3 can look for additional information and provide some
4 context. So, that got taken care of.

5 The technical specifications and
6 Certificate of Compliance standardization got addressed
7 both in Kris' session and a little bit here in John's
8 session, so again I think those topics that got raised
9 that we wanted to talk about later or today.

10 One of the things that didn't come out in
11 the beginning as we -- as the staff posed the session
12 was not only problem solving but problem prevention.
13 So, I think Mike has challenged people here a couple
14 of times today, we might be doing something right now
15 to potentially solve a problem, but we need to -- you
16 know, 30 years later look at the problems that came up
17 because we weren't looking 30 years out. So, I think
18 Mike kind of challenged people to think not just locally
19 but globally in terms of the time and the flexibility
20 that may need to be considered as you move forward.

21 And then we heard from Brian Rude today in
22 terms of the decommissioning sites to keep that in mind
23 as you move forward. Don't just think about all of the
24 new casks that are being loaded and these operating
25 facilities, but to keep them in mind as you move forward.

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1 And a couple of times I think people agreed
2 on what the issues were and the topics were, but it was
3 a question of what's the right vehicle for addressing
4 a particular topic. Is it a Reg Guide, is it a NUREG,
5 is it rulemaking, is it a policy statement? So, I think
6 there was a pretty good discussion, and I think people
7 stepped up to the plate and kind of described when they
8 thought well, sure, this should be a Reg Guide. And I
9 think, again, that goes to not only what are the
10 considerations the staff needs to do, but how they might
11 consider that as they move forward, so that was great
12 for that.

13 And I think that was the last thing because
14 risk-informing again was brought back into this last
15 one in terms of risk-informing being applicable to the
16 standardization of the Certificate of Compliance.

17 So, I did have all of the items from each
18 of the sessions and we did touch upon them. I'll be glad
19 to walk through them if people want to, or at this point
20 if other people have any more thoughts about what they've
21 heard and kind of final thoughts, I'll let Mike have
22 the last word at the end, but I know Rod gave us some
23 good parting ideas.

24 I'm going to turn to the phones first just
25 to give the guys here in the room a little more time

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1 to think about what other final comments they might have.
2 So, Julie, are there -- anyone have any final
3 opportunities for the public to provide questions or
4 comments?

5 OPERATOR: Once again, please press *1. One
6 moment. Sir, I'm showing no questions or comments.

7 FACILITATOR LESLIE: Okay. Give everyone one
8 last chance, going. All right. Mike, go ahead. And I
9 also want to thank everyone's active participation. It's
10 been helpful. I always like it when I don't have to do
11 too hard of a job, and this wasn't a very hard job or
12 hard crowd at all, so I appreciate your active listening,
13 and active participation. Mike?

14 MR. WATERS: Yes, I appreciate, and I know
15 I have the last word, if someone else wants to have the
16 last word that's fine, as well. But a few points; one,
17 obviously, we really do appreciate this feedback. I can
18 envision how already we're going to probably change our
19 approach to some ideas, how we explain it. We've got
20 some really good ideas, I think, in all the areas we
21 talked about.

22 I personally am a very deliberate person
23 on these issues given there's a long history, and we
24 don't want to have unintended consequences. Someone said
25 we should go more straight to, in terms of rulemaking

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1 NRC wants to have -- provide comment on it, but we
2 purposely want to have these dialogues and meetings,
3 as well, as one more round of opportunity through the
4 Federal Register Notice process to provide comments in
5 writing. I think Marc asked me during a break what would
6 that look like? I expect it will be these issues with
7 probably one more layer of depth, what we're
8 considering, some possibilities, not strong
9 recommendations that NRC is going to do this. Maybe some
10 things a little bit more mature, we may need more
11 stronger flavor, so we will encourage through that
12 process to get formal feedback in writing. And with that,
13 I hope the stakeholders provide comments. I was really
14 pleased with this meeting comparably speaking, last July
15 with the feedback, but a lot of it was industry
16 circumspective. But even from industry I saw the vendors
17 and the licensees, NEI and DOE participate, so we
18 appreciate that, as well.

19 As I mentioned this morning, I know people
20 may be eager to email the staff, or send letters. You're
21 welcome to do that. I can't promise everything will be
22 fully incorporated into our next Federal Register Notice
23 soliciting comments. I can't promise we'll formally
24 respond, but we will to a certain extent practical.

25 I think as someone said we've been talking

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1 about this for a long time, so we're very eager to strike
2 the flint and keep on moving going through the formal
3 solicitation process, through the Federal Register
4 process to keep on moving. But there will be
5 opportunities for more stakeholder interactions after
6 that, at a minimum talking about some interesting
7 things. I'd love to have a workshop, for example, just
8 to talk about how would we really, practically go to
9 one COC and one FSAR. Is that practical? What are the
10 hurdles? And it sounds like there's a lot of synergies
11 there.

12 With that, I have nothing more to say other
13 than, one, first, I would like to thank first and
14 foremost Kristina Banovac, who's been the Project
15 Manager on this. It was a very --

16 (Applause.)

17 MR. WATERS: -- a very big task not only
18 to make this meeting happen, but to coordinate with all
19 the experts at NRC, and indeed the stakeholders to get
20 this together. Although you may have seen -- you seen
21 two or three pages for each issue, certainly some slides,
22 it took a lot of work to get there, a lot of homework
23 to get the wording right and making sure we consider
24 everything to have an effective dialogue. And Kristina
25 did a great job leading that, but also as well as John,

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1 and Dan, and Jennifer, and Bernie were also primary
2 people who worked a lot of long hours on this. I think
3 a lot of them worked after hours free of charge to the
4 public to make this happen in order to keep the case
5 work going as well as do this. And I know other people
6 in the audience, other partners from industry, not just
7 from me and the Regions also played a part, as well.
8 So, with that I'd like to finish with a thanks to all
9 the staff who helped to get us to this point so far,
10 as well as to the stakeholders who provided some very
11 valuable input.

12 FACILITATOR LESLIE: Thank you, Mike.

13 MR. WATERS: Thank you to Bret, as well.
14 You've done a great job facilitating, and I hope he can
15 help facilitate the next meeting, as well.

16 FACILITATOR LESLIE: Well, it's on the
17 transcript but that meeting summary form actually
18 -- whether you guys realized it or not meeting summary
19 forms form a very important resource for the
20 facilitators and the staff. It allows us to understand
21 what we did well, what we didn't, concerns, you know.
22 For instance, were those regulatory information
23 summaries helpful for you guys to prepare? It's not
24 something that all staff do, or all approaches do, so
25 again if you've got complaints, concerns, or compliments

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1 feel free to send those in.

2 And I guess with that, I do want to thank
3 both the staff and the participants. It was an easy
4 meeting for me, and I hope I will see you all again in
5 the future.

6 (Off microphone comment.)

7 FACILITATOR LESLIE: Oh, yes. Thank you,
8 Neil. Neil. This meeting is not over. It is over for
9 today, but I want to remind you that we will reconvene
10 promptly at 8:30 to talk about the last part of it. And
11 instead of being behind the computer --

12 PARTICIPANT: I'll be here.

13 FACILITATOR LESLIE: He'll be here, but
14 they'll be talking about the spent fuel storage
15 inspection enhancement initiative and update. Again,
16 remotely, if you don't want to be here in person, but
17 I'm sure, Eric, I mean Neil would appreciate the faces,
18 or the people on the phone.

19 So, anyway, we don't expect that that will
20 take a long period of time, but the agenda starts at
21 8:30, and we believe we'll be adjourned by 10:30. So,
22 thank you very much, Neil. I forgot to do that. Yes?

23 PARTICIPANT: What do we need to get in
24 tomorrow?

25 FACILITATOR LESLIE: Same thing. You

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1 actually have to go back through security. Today you'll
2 drop off your badges. I think Kris has put you into the
3 security system for both days so you're already in there.
4 We'll have escorts down there in the morning, and we'll
5 see you tomorrow morning. Thank you very much, folks.
6 Bye.

7 (Whereupon, the proceedings went off the
8 record at 4:34 p.m.)
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