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1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

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4 OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS

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6 EXTENDED STORAGE AND WASTE CONFIDENCE WEBINAR

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8 TUESDAY,

9 DECEMBER 13, 2011

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11 The webinar was convened at 2:00 p.m., Lisa
12 Janairo, The Council of State Governments, Midwestern
13 Office, presiding.

14
15 PRESENT:

16 LISA JANAIRO, The Council of State Governments,
17 Midwestern Office

18 CHRISTIAN JACOBS, NRC, Office of Nuclear Material
19 Safety and Safeguards

20 CHRISTINE PINEDA, NRC, Office of Nuclear Material
21 Safety and Safeguards

22 JAMES RUBENSTONE, NRC, Office of Nuclear Material
23 Safety and Safeguards

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P R O C E E D I N G S

12:09 P.M.

MS. JANAIRO: I'll start with a few ground rules or housekeeping items before we turn to the presentation. Following the presentation, we'll have time for stakeholder questions and feedback and we'll wrap up by 4 p.m. Eastern Time.

Turning to housekeeping, this webinar is being recorded. The slides from the presentations and the recording will be available on the NRC's Public Meetings page later this month. GoToWebinar will also have a recording archives on its website and you will all receive the link to that recording and a follow-up message that will go out this week.

To reduce the possibility of feedback and other external noise, all lines are in listen-only mode right now and they'll stay that way during the presentation. The speakers will answer questions after all the presentations are complete. We'll take questions in the order received. You have two options for asking questions. You can submit them using GoToWebinar Questions Panel in writing or you can raise your hands and I'll unmute your line. Please identify yourself when you ask a question or make a comment. If you accidentally click on the button to

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1 raise your hand, just click it again and it will turn
2 off.

3 If you do ask a question or make a public
4 comment, please refrain from using a speaker phone to
5 help ensure high audio quality. And finally, after
6 the webinar a brief survey will pop up. Please take
7 the time to fill out the survey so that we can get
8 feedback to help the NRC improve future webinars.

9 I'm going to turn the floor over now to
10 Chris Jacobs with the NRC to explain the purpose of
11 today's webinar and to introduce our speakers.

12 Chris?

13 MR. JACOBS: Okay, thank you, Lisa.
14 Welcome, everyone. My name is Christian Jacobs and I
15 am the Project Manager for Extended Storage and
16 Transportation here at the NRC. Before I go any
17 further, please let us know now or at any time during
18 the presentations if you're having difficulty hearing
19 us. You can do this by raising a hand or sending us a
20 chat message. Please note we will not be responding
21 to other types of comments or questions during the
22 presentations. However, we have set aside time in the
23 agenda for Q&As after the presentations have been
24 completed.

25 First, I want to thank Lisa Janairo from

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1 the Council of State Governments' Midwestern Office
2 for all her assistance in helping the NRC set up this
3 webinar. I'd also like to thank members from the
4 state governments and from the public who are
5 participating in this webinar with us today.

6 The purpose of today's webinar and
7 tomorrow's webinar is to inform you all about the
8 NRC's planned activities on technical and regulatory
9 issues related to extended storage and transportation
10 or EST, of spent nuclear fuel and on plans to develop
11 the Draft Environmental Impact Statement for an update
12 of the NRC's Waste Confidence decision and rule.

13 We've had three recent public meetings in
14 September and October of this year regarding these two
15 subjects, the EST and Waste Confidence. Today and
16 tomorrow provides another opportunity to share this
17 information with those of you who were unable to
18 participate in the previous meetings.

19 Today, we will primarily focus on the
20 Waste Confidence activities and tomorrow we will
21 concentrate more on the EST activities.

22 Now I'd like to introduce two of my
23 colleagues who will be presenting today. With me is
24 Dr. James Rubenstone who is a Branch Chief in the
25 Office of Nuclear Materials Safety and Safeguards.

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1 Also, here with me is Ms. Christine Pineda who is a
2 Project Manager for the Waste Confidence Project.

3 I'll now turn the mic over to Jim who will
4 give an overview of the regulatory program activities
5 at the NRC.

6 DR. RUBENSTONE: Thank you, Chris, and
7 thank you, Lisa, and thank you to the Council of State
8 Governments for helping us come to you in what's
9 something of a new format for our group at least at
10 NRC, and something we hope to exercise more as we go
11 forward if these webinars are successful. I'm
12 assuming everyone can see now the title slide I have
13 up here, NRC's Plan for Extended Storage. Very good.

14 And I'm also assuming that people can hear me as I
15 speak.

16 I'm going to give the two opening
17 presentations that we used in the previous meetings
18 and there may be a little duplication because we
19 haven't changed the slides. But I'll begin with an
20 introduction of some of the issues we're trying to
21 deal with as we move forward with these two projects
22 on extended storage and transportation and updating of
23 the NRC's Waste Confidence decision and possibly the
24 Waste Confidence rule.

25 Right now, we're in a period of some

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1 uncertainty about national policy, although some
2 things remain unchanged. The Federal Government still
3 has the ultimate responsibility for spent nuclear fuel
4 from commercial power reactors and dealing with that
5 in the long run remains a Government duty. Until the
6 policy for ultimate disposal which is still seen as
7 the most likely path for spent fuel is fully resolved,
8 extended storage is something that we're going to have
9 to deal with and it's NRC's responsibility that this
10 extended storage continue to be carried out in a safe
11 and secure manner that protects the environment and
12 the common defense and security.

13 Attacking this problem, NRC is trying to
14 take a system-level look at the entire back end of the
15 fuel cycle. And the back end of the fuel cycle covers
16 everything that happens to reactor fuel when it leaves
17 the reactor until it's put in some final state. This
18 includes certainly any storage on site, at other
19 sites, if those come to be, transportation and
20 handling of the fuel, the ultimate disposal path which
21 looks to be a geologic solution, and any potential
22 reprocessing of fuel that may or may not happen,
23 depending on how the national policy evolves.

24 We're trying to put this together in an
25 integrated fashion and that we are looking at all the

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1 parties that are involved, certainly within the U.S.,
2 and any insights we can gain from working with
3 international counterparts. In the U.S., this
4 includes our NRC licensees which are primarily the
5 power generating utilities and other owners of nuclear
6 power plants and vendors of the storage systems,
7 especially the dry storage systems that we'll be
8 talking about today and tomorrow.

9 The other major interested group, of
10 course, are local and national public interest groups,
11 concerned citizens, concerned residents in the areas,
12 and we want to do our best to engage everyone as early
13 and often as we can on this issue. We understand this
14 has been a long-standing issue. We are taking a new
15 approach to it or a new beginning, given that we're
16 now into a mode where extended storage looks like it's
17 going to be a major part of the solution so we want to
18 get everyone's input on that.

19 Internationally, we are working with other
20 countries that have nuclear power programs where their
21 extended storage is becoming a part of their solutions
22 as well, and trying to gain the best information we
23 can and help other countries with what we have learned
24 along the way.

25 We're now in a planning stage and trying

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1 to put together the program in a way that can best
2 seek input and feedback from everyone involved. We
3 want to give opportunities for everyone to be involved
4 as these issues come forward. There's a number of
5 other players involved. Most of you are probably
6 aware of the Blue Ribbon Commission on America's
7 Nuclear Future that has issued its draft report and
8 will be finalizing its report within the next month or
9 so. They are an advisory committee to the Department
10 of Energy about a number of issues including the back
11 end of the fuel cycle. NRC is very interested in that
12 report. We've been following that issue and we will
13 continue to fold those recommendations into our plans.

14 As the slide says, we're trying to develop
15 some tools to more effectively interact with you. I
16 think this is one example of that. Hopefully, you
17 will find it useful. We are developing also some
18 automated email systems and those addresses will go
19 out very soon to people on our mailing list. Just to
20 point out that everyone who is participating in the
21 webinar today who has given us an email address is on
22 our mailing list. And we'll set that up as a way to
23 interact better with the public through email and
24 solicit comments on various documents as we go
25 forward. And we'll talk about those in a little more

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1 detail.

2 As we have said, there are two basic
3 aspects we'll be dealing with, the extended storage
4 and transportation which has a large technical
5 component and the environmental assessment area which
6 is technically based, but has a slightly different
7 angle on it.

8 Today, we'll focus on the Waste Confidence
9 aspects and Christine will be talking about that in a
10 few minutes. That includes the Environmental Impact
11 Statement and tomorrow's focus will be on the
12 technical areas related to extended storage and
13 transportation. So that wraps up the first
14 presentation.

15 I'm going to move on to the second one.
16 And as we said, we're going to hold questions on all
17 the presentations until we're done. So after this and
18 then after Christine, we will open up the floor.

19 The next set of slides cover both of these
20 projects together and some comparison in how they are
21 complementary. The Waste Confidence decision is a
22 generic determination which the NRC has made relating
23 to the Agency's confidence that there remains a safe
24 and secure way to deal with the waste generated during
25 generation of electricity by nuclear power. It's not

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1 site specific. It deals with the entire waste stream
2 within the U.S. It's not specifically directed to any
3 given licensing review or licensing decision.

4 Christine will go into more detail about
5 this. It was most recently updated about a year ago,
6 December of 2010, to consider the life of a facility
7 plus 60 years. At the same time that the update was
8 issued, the Commission directed the staff to look at
9 potential longer-term updates beyond this period of
10 life plus 60.

11 Our project on extended storage and
12 transportation, as I had stated, is principally
13 technical studies to provide the basis for safe
14 storage over a longer period and any transportation
15 related that includes transportation at the end of the
16 storage period or potential transportation between or
17 among storage sites. This may involve some changes to
18 our existing regulations which are found 10 CFR Part
19 72 and Part 71 for storage and transportation and to
20 guidance which the NRC has issued to the public and to
21 our licensees and applicants to better understand how
22 to meet the regulations. We want to actively and
23 effectively engage the public and other stakeholders
24 on both initiatives and that's part of what we're
25 talking about today.

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1 As I said, there's much in common between
2 these two initiatives, but the goals are not exactly
3 the same. Both of them deal with commercial spent
4 fuel being stored over long periods. Storage is
5 currently done both wet in spent fuel pools at reactor
6 sites and in dry storage, again, mostly at the reactor
7 sites. Dry storage systems have been in use for about
8 20 years and they are -- as fuel cools down within the
9 pools, they can be moved out into dry storage to
10 relieve crowding in the pools.

11 Both the waste confidence and EST
12 considers the same systems, the same effects, the same
13 processes operating over long time scales, so the same
14 types of technical information are used to inform both
15 of them. Where they differ is exactly what you're
16 trying to get out of the analyses. The Waste
17 Confidence has a focus on environmental impacts. It
18 has a broad scope over all of the waste stream within
19 the U.S. And we probably will rely on representative
20 analyses and some generic determinations as Christine
21 will discuss. It's part of NRC's NEPA process. NEPA
22 is the National Environmental Policy Act and we have a
23 process that we follow for every major federal action
24 to prepare an analysis of environmental impacts. And
25 it's a fairly formal process with clearly defined

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1 steps which Christine will talk about.

2 The Extended Storage and Transportation
3 Project is the technical end of this activity and it
4 focuses on technical basis for our licensing actions.

5 We are looking at the various systems and components
6 that make up a dry storage installation and focusing
7 on their significance for performance in performing
8 their safety and security functions. This analysis is
9 going to support our regulations, our guidance, our
10 reviews of applications, our new storage or license
11 extensions of existing storage and any regulatory
12 decisions that we make.

13 I think most people are probably familiar
14 with what a dry cask storage system looks like. The
15 left hand figure is a schematic of one general design.

16 It has a metal canister within a concrete storage
17 cask overpack and as shown inside, the fuel assemblies
18 within their -- fuel rods within their original
19 assemblies are placed within this system. The system,
20 the water is removed and it's vacuum dried and
21 backfilled with inert gas. And then they are put out
22 in storage configurations. The right hand shows two
23 characteristic examples. The upper one is in more
24 vertical configuration like the schematic on the left.

25 The lower figure is a horizontal configuration and

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1 you can see the opening where the metal canister is
2 inserted within this concrete structure.

3 There's a number of different designs in
4 use. Right now, there's roughly 1500 loaded casks
5 already in existence, again mostly at sites where the
6 waste was generated at that nuclear power plant.
7 These include both currently operating sites and some
8 decommissioned sites.

9 Stressing again the engagement
10 opportunities, this is a project that's going to take
11 several years and will be broken into a number of
12 phases. We're just toward the end of our very initial
13 planning phase now where we're laying out how we
14 expect to go forward. We're trying to define the
15 tasks in a clear way and develop plans and schedules
16 to accomplish those tasks.

17 We have two draft reports in preparation
18 right now. One of them is on waste confidence and how
19 we expect to proceed in developing an EIS and
20 Christine will talk about that in a little bit of
21 detail. And another which looks at NRC's evaluation
22 of the different potential technical issues that could
23 emerge for dry storage and put some priorities on
24 those relative to the state of the knowledge of the
25 various processes that could affect the systems and

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1 how those apply to the safety functions of the
2 different aspects of the material. And we'll talk
3 about that in a little more detail in the webinar
4 tomorrow.

5 The slide says we'll be issuing the drafts
6 later this fall. Well, we're still in fall
7 technically. We hope to get these out within the next
8 weeks to month or so. We're trying to get these in a
9 form that will be explaining our process as clearly
10 and concisely as possible and we will welcome public
11 comments on this. There will be a formal comment
12 period with a mechanism for public to provide their
13 comments when these are released.

14 As I said, the NRC NEPA process also will
15 be in place for our waste confidence EIS work and that
16 provides periods for public engagement during scoping
17 and when draft EISS are available for comments.

18 In addition to those formal ones, we'll
19 probably have other technical reports that we'll be
20 putting out for comments and hope to have more public
21 meetings and public webinars if those prove
22 profitable. We're always looking for the best way to
23 continue our interactions in a productive way and we
24 certainly welcome your input on that and are happy to
25 listen to that during the discussion phases as we go

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1 forward.

2 Chris, that wraps it up for me, so as I
3 said we'll hold off questions to the end and I'd like
4 to let Christine go ahead with the more detailed
5 discussion about what we're doing in the waste
6 confidence area.

7 MS. PINEDA: Thanks very much, Jim. This
8 is Christine Pineda. Thank you all for attending this
9 afternoon. First, I'm going to talk a bit about or
10 give you some background on Waste Confidence decision
11 and then I'll go into more about what our activities
12 are for -- and our plans for the long-term update for
13 Waste Confidence. Waste Confidence is the outcome of
14 two court cases in the late 1970s. The NRC was sued
15 concerning the availability of a disposal for spent
16 nuclear fuel and also over whether there would be --
17 whether spent fuel could be stored on site past the
18 operating licenses of reactors.

19 The court decided that the Commission
20 needed to make two findings. One was that it had --
21 whether it had reasonable assurance that an off-site
22 disposal solution would be available by the expiration
23 of the plant's licenses and if not, whether another
24 finding that's indicated the Commission's level of
25 assurance about storage of spent fuel, the safety of

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1 storage of spent fuel at the sites beyond the
2 expiration of the reactor operating licenses.

3 So the first Waste Confidence decision was
4 published in -- excuse me. The first Waste Confidence
5 decision was published in 1984 and it goes beyond the
6 minimum legal requirements, these two requirements
7 that I described, that I just described in that it
8 also was established to fulfill NRC's NEPA obligations
9 by considering the storage impacts beyond license life
10 of a reactor. It is a generic determination as you
11 heard from Jim in that it assesses the impacts
12 generically and applies to storage of spent fuel at
13 all reactor sites in the U.S.

14 And generally, it assesses the technical
15 feasibility of a repository, when disposal will be
16 available, and whether waste can be stored on site,
17 safely, past the expiration of facility licenses.

18 As I mentioned, the NRC adopted the
19 original Waste Confidence Decision in 1984 and it was
20 updated in 1990, reviewed in 1999 without an update,
21 and updated again as Jim described in 2010, almost
22 exactly a year ago. The changes in 2010 were to
23 modify Findings 2 and 4 and you can see the five
24 findings here on this slide. Finding 2 was modified
25 to state that at least one geologic repository would

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1 be available when necessary and Finding 4 was revised
2 to state that spent fuel can be stored safely and
3 without significant impacts for at least 60 years
4 beyond the license life beyond any reactor.

5 The basis for the 2010 update of the Waste
6 Confidence rule is contained in the Statements of
7 Consideration that are in the Federal Register. And
8 for those who don't have that, that's 75 Fed. Reg.
9 81037. It's dated December 23, 2010. And that
10 provides all the -- it lists the findings and then it
11 provides discussion for each finding that describes
12 the basis for how the Commission reached that finding.

13 As you may be aware, the State of New York
14 and other parties sued the NRC on the 2010 Waste
15 Confidence Rule and its consideration of environmental
16 impacts and that's an on-going court case now. So
17 because of that sensitivity, we won't be talking about
18 the 2010 update or that's not part of the scope of our
19 meeting today. We can answer some clarifying
20 questions, but in general, it's not the scope of our
21 meeting.

22 So that's what I have for background.
23 There's one slide here that just shows the difference
24 between the time frame between the recent update and
25 the previous Waste Confidence. That's more for -- if

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1 there are any questions. but I'm going to go now to
2 the staff's activities in developing a long-term
3 update of the Waste Confidence decision.

4 As I mentioned, Waste Confidence is a
5 generic safety and environmental determination and we
6 will be updating it to account for the impacts of
7 long-term storage that's past beyond 60 years, past
8 licensed life.

9 So first, I will talk about the components
10 of the long-term update and our process and a general
11 schedule for the update. And then I'll talk a little
12 about the preliminary scope of the EIS and a report
13 that we'll be publishing this fall that Jim mentioned.

14 That's hopefully in the next three weeks. And then
15 I'll go over the opportunities that we see now for the
16 public to provide input throughout this process of
17 developing the update. And as Jim mentioned,
18 part of our goal today is to receive your suggestions
19 on ways to provide input.

20 When updating the Waste Confidence
21 decision in 2010, the Commission also directed the
22 staff to begin the longer-term effort to update the
23 decision rule to account for the potential for
24 extended storage beyond the 60 years past license
25 life. And the staff developed a plan for this update

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1 and submitted it to the Commission in February of this
2 year. And that plan also explains how work on waste
3 confidence is integrated with the plans for a
4 regulatory program review for extended storage and
5 transportation that we issued last June and related to
6 the technical extended storage activities that Jim
7 mentioned. And that's what Jim will be talking about
8 tomorrow.

9 The update process includes an earlier
10 report on a preliminary EIS framework. That's a
11 report that we will be publishing in the next few
12 weeks for public comment. And what I'm calling the
13 formal update components which are the EIS, a draft
14 Waste Confidence Decision and possibly a proposed
15 rule.

16 So to develop the long-term update, we'll
17 first develop the EIS that will analyze the impacts
18 that will be associated with extended storage. And we
19 will do this in the same manner as other EISs that the
20 NRC develops except that this EIS as I'll describe in
21 the coming slides is unusual in that it's assessing
22 impacts generically and it's extending out for 200
23 years.

24 As the EIS is being completed, the staff
25 will use the analyses of the impacts of the EIS to

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1 inform a proposed revision to the generic and safety
2 findings and the Waste Confidence Decision. This
3 means that we would correlate the analyses of the
4 impacts in the EIS to some generic safety and generic
5 findings for a period of storage after reactor license
6 life and that could be 100 years or 200 years or some
7 other number instead of the current 60 years. And
8 that would be the draft decision.

9 The EIS and the draft decision could
10 inform an update to the rule. And just a note, the
11 current rule encompasses Findings 2 and 4. So the EIS
12 would -- is directly related to Finding 4 which if you
13 go back to the previous slide is the -- relates to the
14 60 years past license life for storage.

15 I want to note that the development of
16 this rule and the EIS is not an endorsement by the NRC
17 of extended storage of spent fuel. It's not something
18 that we're proposing. It's just that we're trying to
19 understand the impacts.

20 I'll talk about the general time line. As
21 you can see from this slide we are planning to have
22 the final update complete by 2019. In the very near
23 term we'll be publishing our draft framework report
24 for public comment and the final report in the spring
25 of next year and I will just note that the final

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1 report will include a section that will describe the
2 comments that we receive from the public and how we
3 responded to those comments in the final report.

4 And this report is something that we're
5 developing outside the NEPA process. It's sort of a
6 way to get an early sense in terms of this project of
7 what the public opinion is regarding the direction
8 we're headed for the EIS. We're trying to get a --
9 we're presenting the information in this report at a
10 general level and we're trying to get a general sense
11 of are we headed in the right direction.

12 And then when we start the formal NEPA
13 process, that could start as early as next year, but
14 it's more likely to start the following year. We
15 start that, of course, with the public scoping process
16 and that is the whole purpose of that is to receive
17 input on the scope of different aspects of the EIS.

18 As we're concluding the public scoping
19 process, we would develop a report that summarizes the
20 input that we receive about the scope of the EIS in
21 that -- and that report will be made public and it
22 will also feed into beginning to develop the draft
23 EIS.

24 We would develop the draft EIS and then --
25 in a draft decision and possibly a proposed rule and

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1 those would be -- those two or three components would
2 be published for public comment simultaneously in
3 about 2017 and then we would, of course, develop --
4 receive public comments and develop the final EIS and
5 the final decision, if applicable, the final rule.

6 The report that we're working on now will
7 update and expand the information of the EIS scope
8 that we provided to the Commission back in February
9 and the main structure of that information was to
10 provide a proposed storage scenario, four storage
11 scenarios and our preliminary assumptions. And this
12 report -- so this report will contain additional
13 information about the scenarios and any assumptions
14 and adds some assumptions and also describe our
15 preliminary methodology for our overall EIS, doing the
16 analyses for the EIS.

17 We'll also have some information about the
18 process and the schedule. And then we'll talk about
19 some aspect of this report.

20 The preliminary time frame for the EIS
21 analyses is on the order of 200 years and it starts
22 from about the middle of this century until about
23 2250. And we might shorten or lengthen this time
24 frame depending on the kind of feedback we get and on
25 the technical information that we have.

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1 Right now, we're planning to examine the
2 impacts, as I mentioned, associated with four storage
3 scenarios and the associated transportation. Since
4 the NRC is not proposing any particular scenarios that
5 are used to develop a range of impacts for comparison
6 purposes, our view is that we can't analyze all
7 possibilities and we believe that these scenarios are
8 reasonable and aren't too speculative to include in
9 the EIS.

10 I just want to mention also this isn't a
11 licensing EIS. So these scenarios are not proposed
12 licensing actions. We only develop them in order to
13 come up with what we think would be reasonably
14 foreseeable and therefore worthy of assessing the
15 impact. So these aren't pending NRC licensing
16 actions.

17 So the scenarios are listed here and they
18 include continued storage at the reactor sites. And
19 that was also accounted for in the 2010 update.
20 Storage at several regional facilities in different
21 parts of the country and storage at one central
22 location where all the spent fuel and all other waste
23 would be consolidated, and then storage -- or one
24 scenario that includes some reprocessing and in the
25 scenario some spent fuel would be transported to a

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1 reprocessing facility and then the high-level waste
2 resulting from that reprocessing would be stored at a
3 co-located storage facility.

4 Each of the scenarios includes the
5 transportation of spent fuel and high-level waste to a
6 geologic repository for disposal. And we are assuming
7 that at least one repository would need to be
8 constructed.

9 And now I'll talk about some aspects of
10 the methodology. We are going to be developing what
11 we're calling generic -- composite generic sites. And
12 this is -- these are going to be developed by
13 reviewing actual reactor sites, storage sites and
14 decommissioned reactor sites to get a sense of the --
15 what are the key characteristics associated with all
16 of these sites and how can they be grouped or
17 separated so that we can then develop generic
18 composite sites that capture the range of
19 characteristics that we see at the actual sites.

20 So the goal is to reflect in our composite
21 site the range of characteristics that we see in
22 natural sites and therefore, we would be capturing the
23 range of impacts when we do our impacts analysis we
24 would capture the range of impacts that we -- that you
25 would see at the actual site.

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1 Because of the nature of this EIS being
2 generic and also the long time frame, we'll be doing
3 qualitative and quantitative analyses. So we will be
4 using qualitative and quantitative information.

5 Part of our -- part of what we're doing is
6 to determine how we can make use of these two
7 different kinds of information and the EIS will take
8 advantage of relevant information from extended
9 storage technical activities. And that may be where
10 some additional quantitative information is provided.

11 Now I'll talk a little bit about our
12 assumptions. These are some examples of our
13 preliminary assumptions. The most important probable
14 assumption that we have is that the spent fuel storage
15 and high-level storage will continue under current
16 regulatory program that is the regulatory program that
17 will be similar to the current program as it will be
18 extending out 200 years. But we are not going to be
19 assuming that spent fuel will be sitting on a pad and
20 slowly deteriorating. We're assuming that as -- that
21 while Waste Confidence is not a licensing rule or a
22 licensing decision, we're assuming that the NRC's
23 regulatory and licensing programs are in full effect.
24 And anything that would need to be done in that realm
25 would be done as needed.

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1 So if something -- if there's a
2 development, you know, at a storage site and a new
3 regulation is needed and that would -- and the
4 regulation would be developed. This is a major
5 assumption for the EIS. Because it affects the kinds
6 of impacts that we would see, the types and the
7 quantities of impacts.

8 We're also assuming that spent fuel will
9 be stored primarily in dry casks although we will be
10 taking some -- assuming some fuel, a limited amount of
11 fuel would be stored for extended periods in pools.
12 And we would be looking including an assessment of
13 impacts from accidents and also from terrorist
14 attacks. We haven't yet identified our scenarios, but
15 I can say that the accident scenarios will include
16 natural events such as an earthquake.

17 We are assuming, as I described in the
18 fourth scenario, that we will be covering the storage
19 of waste of reprocessing commercial spent nuclear fuel
20 in the EIS scope. I don't think I clarified that
21 earlier, but it is from commercial spent nuclear fuel
22 and that's it when you look at reprocessing. And, of
23 course, assuming that disposal is the endpoint for all
24 the scenarios as I described.

25 So I'll talk a bit about the process now

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1 and stakeholder engagement. For those of you who are
2 familiar with the NEPA process, meaningful stakeholder
3 input is essential for developing a high-quality EIS
4 and for an Agency's decision making process. And one
5 of the main tenets of NEPA is to maximize public
6 participation. And so I kind of described and when I
7 was going over the schedule or the -- on the chart
8 that sort of described the schedule where there's
9 opportunities for input, but just to go over that, we
10 will be publishing a report this fall for public
11 comment and then it's possible in the next two years
12 before we start the formal NEPA process that we might
13 be having additional webinars or other meetings.
14 Those could be general public meetings or smaller
15 meetings to engage the public or specific groups.

16 And with the -- in the NEPA process, of
17 course, public input -- the NEPA process begins with
18 public input and that is the scoping process I
19 described. And then, of course, when you publish a
20 Draft EIS, we would receive public comments on the
21 Draft EIS. And so these are the basic opportunities
22 for public input in the NEPA process, but we will be
23 having, I'm sure, communication with other -- with
24 specific groups such as Tribes and state governments
25 and local governments as needed over the coming years

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1 in addition to these large or more basic steps.

2 So as Jim mentioned, we want to hear from
3 you about what other opportunities we can provide for
4 public input.

5 One thing I wanted to mention is that we
6 will be setting up email addresses and when this
7 report is distributed in the next three weeks or so
8 we'll have it on our website, but we'll also
9 distribute it through our email address and all those
10 who have registered for this webinar have been added
11 to our distribution list.

12 So I think that's all I have and Jim and I
13 can take questions now on either of our presentations.

14 MS. JANAIRO: This is Lisa Janairo. We'll
15 entertain questions now from anyone. As a reminder,
16 please raise your hand if you would like to ask a
17 question and we'll unmute your line or you can pose
18 questions through the questions panel as well.

19 While everyone is thinking of good
20 questions to ask, I guess I will ask a couple.

21 I had a question about reprocessing as one
22 of the assumptions and I wondered if, Christine, you
23 could explain why reprocessing over the 200-year time
24 period that you're looking at, why that was included?

25

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1 My recollection is that the Blue Ribbon
2 Commission in their report determined that there are
3 no technologies available right now on a commercial
4 scale that could address the waste problem in this
5 country. So I'm wondering where reprocessing kicks
6 in.

7 MS. PINEDA: Can you hear me?

8 MS. JANAIRO: Yes.

9 MS. PINEDA: That was -- we had sort of a
10 working group and that was determined that while
11 there's not -- it's not on the immediate horizon that
12 it is reasonably foreseeable in the sense that it's
13 an existing technology in the world and the U.S.
14 isn't there, but it is something that could happen
15 and we thought that to fully balance the impacts of
16 storage for high-level waste and spent fuel that we
17 could consider that. We're not saying that we're
18 headed in that direction, but including that scenario
19 allows for us to analyze generally impacts storing
20 high-level waste over long periods.

21 As I say, we're not proposing that we're
22 going in that direction. It just would -- the
23 purpose of this EIS is to provide us with information
24 about the impacts.

25 DR. RUBENSTONE: Just to add to that I

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1 think what Christine's point is that we're trying to
2 within the EIS capture enough possibilities without
3 being too speculative that we don't -- as she said,
4 we're not committing that this, in fact, is some kind
5 of policy because it's not NRC's position to make
6 those decisions. But we wanted to make sure that we
7 captured that as a potential impact if national
8 policy does end up including reprocessing.

9 And it's just within one of the
10 scenarios. The main focus, certainly, is on the
11 long-term storage aspects.

12 MR. JACOBS: Lisa, are you seeing anybody
13 that has any questions or has their hand raised at
14 this time?

15 DR. RUBENSTONE: I'm going to take that
16 as an indication that we've explained things very
17 clearly. We're willing to stay on if people want to
18 come up with questions.

19 MS. JANAIRO: I'm surprised that no one
20 has any questions, so I'm going to ask another one.
21 And that is continued generation of spent fuel over
22 the 200-year period, what are the assumptions for
23 that?

24 MS. PINEDA: We are assuming that --
25 about the current rate which is about 2000 metric

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1 tons per year of waste generated, so nuclear power
2 remains at about the 20 percent contribution to the
3 nation's electric power, but that given that power
4 demand would increase over time, that that also would
5 increase. So it's 2000 tons per year plus a little
6 bit that would be generated in terms of the spent
7 fuel.

8 MS. JANAIRO: I thought I saw a question
9 come in. No.

10 I'm going to -- somebody has got a hand
11 raised. We'll go first to Cort Richardson. MR.
12 RICHARDSON: Can you hear me?

13 MS. JANAIRO: Yes, we can.

14 MR. RICHARDSON: Christine, my question
15 for you is, since you're talking about several
16 centuries for your scenario for storage, particularly
17 on-site, it seems to me that that amount is really de
18 facto disposal. Doesn't it realistically -- and so
19 my question for you is in your scenarios that you are
20 going to be considering, are you going to be studying
21 the impacts and the suitability of disposal on site
22 at the site of generation existing at nuclear power
23 plants in your examination of these issues?

24 It seems like what I heard is you're
25 talking about storage, but when you think about the

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1 amount of time that's involved and the reasonable
2 possibilities that any sort of disposal program would
3 start up 300 years or 200 or 250 years from now, is
4 how reasonable is that? And have you considered that
5 question in terms of training, this study that you're
6 engaged in?

7 MS. PINEDA: I do realize that the time
8 frame is far for considering the storage of spent
9 fuel, but we haven't thought about it in terms of
10 disposal because we are assuming that there would not
11 be a point at which anyone would walk away from it.
12 We're assuming, as I mentioned, that it occurs under
13 the current regulatory program or one similar and
14 that actions would be taken to store it that way over
15 that time period. So for example, if it turns on a
16 particular storage path, if it turns out that the
17 spent fuel would need to be repackaged, then to
18 continue being stored at that site, then that's what
19 we would -- that's one of those things that we would
20 include in the EIS.

21 One of the things we're thinking about is
22 levels of aging management and so we might have a
23 range of what you might call minimal aging management
24 or more involved aging management and that one of the
25 main components of that would be of course

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1 monitoring, but also things like repackaging and
2 other sort of maintenance that goes on.

3 And so while you -- we aren't looking at
4 the impacts from a disposal perspective, we would be
5 looking at -- we have to assume a certain level of
6 aging management, what is that -- how does that
7 reflect in terms of radiological impacts, especially
8 to workers and also costs.

9 DR. RUBENSTONE: If I could just add to
10 that. I understand that there's concern that when
11 stored at a given location for a very long time that
12 that appears to be disposal, but the way we consider
13 disposal is in an engineered facility that's designed
14 just for that disposal over very, very long time
15 periods.

16 And we are optimistic that the national
17 policy will, in fact, be moving forward by doing the
18 EIS to account for extended storage and then a
19 disposal. That's what we see as the generally
20 recommended path that's been put out by almost all
21 international bodies and the Blue Ribbon Commission
22 is that disposal is the ultimate endpoint for the
23 back-end fuel cycle.

24 So storage is actively managed and it has
25 ongoing aging management and remediation, observation

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1 inspections just as Christine outlined. Disposal is
2 the final stage where you're putting something into a
3 geologic state where one can close that up and not be
4 actively managed.

5 MS. JANAIRO: Did you have a follow up?

6 MR. RICHARDSON: Yes. This is for Jim.

7 Jim, do you recognize that even though
8 NRC is purporting to be nonpolitical in this process
9 and to not actually make proposals, but rather to
10 consider the impacts and safety consequences of
11 different scenarios, isn't it reasonable though to
12 consider that if you are to determine that
13 essentially long, very long term storage is safe and
14 acceptable, doesn't that serve really to undercut the
15 pressure on America, on society, on the industry, and
16 other stakeholders to actually resolve the disposal
17 problem and to move ahead with a program that
18 actually gets that job done?

19 Aren't you contributing really to perhaps
20 letting everyone off the hook and allowing this
21 unsolved problem and the current predicament that
22 we're in, notwithstanding what we hope the Blue
23 Ribbon Commission is able to accomplish, there's no
24 guarantee that they'll be able to move a very
25 polarized partisan Congress and other players to make

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1 decisions.

2 Aren't you concerned about that, that you
3 might be actually, even inadvertently contributing to
4 the stalemate that we're in?

5 DR. RUBENSTONE: I see your point, and I
6 agree that one could interpret NRC technical
7 positions where evaluations of impact as advocating
8 for a particular path.

9 We are going to do our best to try to
10 stay free of that and I think it is incumbent on NRC
11 to make the determinations about what would have to
12 be done from a technical point of view for whatever
13 conditions exist. And we can't be in the position of
14 not doing that work and assuming that that will push
15 Congress and other national policy makers to move to
16 a certain path.

17 It's incumbent on us to ensure that
18 anything that is happening now and is happening on
19 the horizon can be done safely and securely. And the
20 environmental impacts, again, Environmental Impact
21 Statements are designed as information documents.
22 They are not decision- making documents per se. I
23 think by describing the environmental impacts and
24 that includes, as Christine mentioned, not just
25 radiation to public or workers or releases or other

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1 pollutant-type impacts, but also cost implications,
2 that can help inform decision makers that this is not
3 something that can be indefinitely postponed.

4 I think the Blue Ribbon Commission was
5 clear that even though there is not a near-term
6 repository solution for commercial spent nuclear fuel
7 that is the ultimate goal and it's not just a matter
8 it off and hoping that it will happen at some time in
9 the future.

10 I think if the international experience
11 tells us anything is that all of these processes take
12 time and the time scales are often different than the
13 time scales used in say common political cycles or
14 common business decisions. So it's incumbent on the
15 NRC to stay informed and provide information on what
16 we think is the right things to be putting out for
17 the decision makers. We certainly are not intending
18 to justify delaying decisions in any way.

19 MS. JANAIRO: We have a question from
20 Marc Nichol. Marc, your line is open.

21 MR. NICHOL: Yes, I had a question on the
22 draft preliminary EIS framework. The presentation
23 showed that that was going to be available for public
24 comment in fall 2011.

25 Given that it's almost the end of 2011,

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1 do you have a better estimate of when that might be
2 available?

3 MS. PINEDA: It should be out in about
4 two weeks.

5 MR. NICHOL: Okay.

6 MS. PINEDA: By the end of December, end
7 of December.

8 MR. NICHOL: Okay. And do you know how
9 long you'll provide for comment?

10 MS. JANAIRO: Forty-five days.

11 MR. NICHOL: Okay, thank you.

12 MS. JANAIRO: Thank you, Marc.

13 MR. JACOBS: This is Lisa again. I will
14 make a plug for a future webinar to go over what is
15 in the draft report. Ideally, before the public
16 comment closes, if that's possible. And then also
17 you may be aware of the National Transportation
18 Stakeholders' Forum that the Department of Energy
19 organizes and I know the NRC is getting increasingly
20 involved in that. And the meeting that will take
21 place in May, the week of May 14th. That might be
22 another opportunity to engage State and Tribal
23 stakeholders in particular.

24 It looks like we have another question.
25 Just a caution that management of spent fuel is not

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1 only a health and safety issue, it's also a public
2 perception issue. It would be very difficult to
3 construct new nuclear power plants from a public
4 acceptability point of view if we don't resolve the
5 waste disposal issue.

6 Okay, looking again to see if anybody has
7 any further questions. If not, I will turn it over
8 to Chris Jacobs to wrap things up.

9 Last call for questions. Okay, Chris.

10 MR. JACOBS: Lisa, this is Chris. I did
11 see a question earlier. It looks like it's
12 disappeared now, but someone was asking if they could
13 scroll through the slides while we were discussing
14 other questions and we do have the slides on the
15 website right now. The -- I believe there's links in
16 the meeting that was sent out, too.

17 MS. JANAIRO: And I can bring up this
18 slide, this show the web address that houses all the
19 information from the public meetings. If you click
20 on the public meeting archive link on this page, it
21 will take you to a section on that page where there
22 these presentations are posted from the earlier
23 public meetings that took place. But my
24 understanding, Jim, is that they are identical to
25 what you and Christine gave today?

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1 DR. RUBENSTONE: Right, and what's also
2 in that archive are summaries from those previous
3 meetings so if people are interested in the questions
4 that came up at those meetings are captured in those
5 summaries.

6 MR. JACOBS: Well, unless there are any
7 other questions, I'm going to turn it over to Jim for
8 closing remarks.

9 DR. RUBENSTONE: Just a few statements.
10 I want to thank everyone again who attended. I see
11 we had more than 40 attendees which is fantastic and
12 thank Lisa, especially and the Council of State
13 Governments for making this webinar possible.

14 And as Lisa stated, we can put in a plug.
15 We'll have a similar webinar tomorrow for anyone who
16 would like follow up. We'll have a little more
17 information about some of the technical work we're
18 planning in support of the extended storage and
19 transportation project here at NRC.

20 Just recapping some of the questions,
21 questions about some of the details of what's in the
22 EIS including what we're making in the assumptions in
23 the scenarios about generation of spent fuel in the
24 future, reprocessing. A good question about whether
25 extended storage is, in fact, a de facto disposal and

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1 whether NRC's work in this area might, in fact, be
2 driving decision making.

3 And of course, the usual question about
4 when are we going to get a report to look at and I
5 appreciate that from Marc. And I appreciate everyone
6 who has asked questions here.

7 And also as Lisa pointed out, the
8 upcoming other public meetings including the National
9 Transportation Stakeholders' Forum in May, we will
10 consider holding another webinar. We think that's
11 going to work during the comment period on the EIS
12 report and the Waste Confidence report and on the
13 complementary report that I'll talk about tomorrow
14 that we're working on now with priorities of various
15 technical aspects.

16 I also appreciate the comment that came
17 from one of the questioners about the public
18 perception aspect of waste disposal relative to new
19 licensing of Waste Confidence decision. Of course,
20 it was intended to in part address that, but public
21 perception is a challenging piece of the story. And
22 NRC is doing its best to make clear how we think
23 things can be done safely and securely and where the
24 limits are for that.

25 So in closing, just thank everyone again

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1 who participated and same time tomorrow, I'll run
2 through the similar introductory material and talk a
3 bit about our work on extended storage and
4 transportation. And yes, the website that Lisa just
5 popped up there, you can get to that from our NRC
6 public website at www.nrc.gov either by going to the
7 link she posted up or following a path under
8 radioactive waste spent fuel storage and public
9 involvement page. So thanks again to everyone who
10 participated.

11 MS. JANAIRO: Thank you. This concludes
12 the webinar. I hope you'll join us again tomorrow at
13 this time and again watch for the public message
14 that's going to ask you just a few questions and
15 you'll get an email message from GoToWebinar later
16 this week with a link to the recording. Thank you.

17 (Whereupon, at 1:11 p.m., the webinar was
18 concluded.)
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