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Decommissioning Process at
San Onofre Nuclear Generating Station

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
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4 PUBLIC MEETING TO DISCUSS THE
5 DECOMMISSIONING PROCESS AT
6 SAN ONOFRE NUCLEAR GENERATING STATION

7 + + + + +

8 THURSDAY

9 SEPTEMBER 26, 2013

10 + + + + +

11 CARLSBAD, CALIFORNIA

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13 The Public Meeting convened at the Omni La
14 Costa, 2100 Costa Del Mar Road, Carlsbad, California, at
15 6:00 p.m., Chip Cameron, Facilitator, presiding.
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1 NRC STAFF PRESENT:

2 CHIP CAMERON, Facilitator

3 LARRY CAMPER, Director, Division of Waste Management
4 and Environmental Protection, FSME

5 BRUCE WATSON, Chief, Reactor Decommissioning Branch,
6 FSME

7 BLAIR SPITZBERG, Chief, Repository and Spent Fuel
8 Safety Branch, RIV

9 MIKE DUSANIWSKYJ, Financial Analyst, Financial
10 Analysis and International Projects Branch, NRR

11 BOB EVANS, Senior Inspector, NRC

12 RYAN LANTZ, Chief, Region IV Reactor Projects Branch
13 D, NRC

14 PAUL MICHALAK, Chief, Environmental Impact Statement
15 Branch, Waste Confidence Directorate, NRC

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P R O C E E D I N G S

(6:21 p.m.)

MR. CAMERON: My name is Chip Cameron and I'd like to welcome you to the public meeting tonight. And the topic for tonight is the Nuclear Regulatory Commission.

I'm going to use the term and I think everybody else will use "NRC," but we'll try not to use acronyms tonight except for that one or others that are easily understood, but it's the NRC's decommissioning process.

And specifically, NRC's decommissioning process relative to SONGS Unit 2 and 3, San Onofre Nuclear Generating Station.

And it's my pleasure to serve as your facilitator tonight. And I'm going to be assisted by Bob Hager who is in the back of the room.

And Bob is a certified facilitator in the NRC's facilitator program. And what Bob and I are going to do is to try to help all of you to have a productive meeting tonight.

I just wanted to cover a few items on the process for the meeting so that you know what to expect tonight. And I'd like to talk about the objectives for the meeting, the format for the meeting, go over some

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1 simple ground rules with you for the conduct of the
2 meeting and then introduce the NRC speakers who are up
3 here in front of you and what their topics are going to
4 be.

5 In terms of objectives for the meeting, the
6 NRC's primary objective tonight is to give you clear
7 information on NRC's decommissioning process.

8 And these are the rules that the NRC and the
9 licensee, in this case Southern California Edison, these
10 are the rules that the NRC and the licensee has to follow
11 over the course of the decommissioning of the reactors.

12 We'll also try to provide you with
13 information on specific aspects of the SONGS facility's
14 decommissioning and we're going to provide that
15 information to you in two ways.

16 One is we have a number of presentations
17 from the NRC staff, and then we're going to answer any
18 questions that you might have about the decommissioning
19 process after the NRC staff is done with their
20 presentation. And that's the format, presentations,
21 and then question/answer with all of you.

22 Now, some simple ground rules for the
23 meeting tonight. I would just ask you to hold all of your
24 questions until we get done with the NRC presentations
25 so that you'll have a complete picture before we go on

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1 to you for questions.

2 And I would just thank you for your patience
3 in advance. It's not an overly long set of
4 presentations, but it will take some time because the NRC
5 wants to give you as much information as possible.

6 When we go on to you for questions, just
7 signal me and I will bring you this cordless microphone
8 or Bob Hager back there will bring you the cordless
9 microphone. And just please introduce yourself to us
10 and ask your question, or make a comment.

11 I would just ask you to be brief so that we
12 can make sure that we get to everybody who wants to talk
13 tonight.

14 We don't have as big a turnout as we were
15 planning for. So, that may give us more time tonight,
16 but I would ask you to be brief. And I would also ask
17 you to follow the rule of only one person at a time
18 speaking. We want to give our full attention to whomever
19 has the microphone at the moment.

20 As I mentioned, the objective of the meeting
21 is to give you information on the NRC decommissioning
22 process, but we realize that there is broader concerns
23 in relationship to SONGS than just decommissioning and
24 we want to try to answer questions that you might have
25 on any of those broader concerns.

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1 They may not be in-depth answers, but we do
2 want to try to address those questions, but the primary
3 focus is on the decommissioning process.

4 And I mentioned that the way we're going to
5 get the information to you is through the presentations
6 and through answering your questions. That doesn't mean
7 that if you have a concern or a comment that you want to
8 give the NRC that you can't make a comment. Okay?

9 It doesn't have to be a question, but I would
10 just say that tonight is not the night for long speeches
11 on anything. And let me introduce the NRC staff that's
12 going to be speaking to you tonight.

13 First we're going to go to Larry Camper who
14 is right here. And he's the director of the Division of
15 Waste Management and Environmental Protection in the NRC
16 Office of Federal, State and Environmental Management.
17 And that's a headquarters office in Rockville, Maryland.
18 And Larry is going to give you a broad overview of the
19 reactor decommissioning process.

20 After that, we're going to get into a little
21 bit more depth and we're going to go to Bruce Watson who
22 is right here.

23 And Bruce is the chief of the Reactor
24 Decommissioning Branch in Larry Camper's division also
25 NRC headquarters in Rockville, Maryland.

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1 Next we're going to go to Blair Spitzberg.
2 And Blair is the chief of the Fuel Safety and
3 Decommissioning Branch in NRC's Region IV. And that's
4 one of four regional offices. And that one is in
5 Arlington, Texas. And Blair is going to talk to you
6 about the NRC inspection program for decommissioning
7 reactors.

8 And we know there's going to be a lot of
9 interest in how the NRC inspects what's going on during
10 the decommissioning process.

11 After Blair is finished, we're going to go
12 to Mike Dusaniwskyj who is up here. And Mike is an
13 economist. And he's in the Decommissioning - well, he's
14 in the Financial Analysis and International Projects
15 Branch in the NRC's Office of Nuclear Reactor Regulation,
16 also NRC headquarters Rockville, Maryland. And he's
17 going to talk to you about decommissioning funding,
18 because we know that that's also of interest of you.

19 Then we're going to go back to Blair
20 Spitzberg who is going to talk to the NRC regulation of
21 spent fuel storage at the San Onofre facility.

22 And I think we're ready to go to Larry.
23 We'll go through all the presentations, and then we'll
24 be back to you for question and answer.

25 Larry.

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1 MR. CAMPER: Thank you, Chip. Good evening,
2 everyone. Thanks for coming out tonight and
3 participating in this important meeting and taking time
4 out of your busy schedule. And I must tell you it really
5 is a pleasure to be here with you. This is a beautiful
6 place that you live. So, really, it's a nice spot. So,
7 it's a pleasure to be here.

8 I am Larry Camper, the director of the
9 Division of Waste Management and Environmental
10 Protection.

11 As Chip said, I do have responsibility and
12 my staff has responsibility for the decommissioning for
13 the Nuclear Regulatory Commission, including nuclear
14 power plants. And so, we do hope to share some
15 information with you this evening about that process and
16 answer your questions.

17 As Chip said, though, we also want to make
18 ourselves available to answer other questions you might
19 have. There's been a lot of interest around this
20 particular site and we understand there may be some other
21 things you'd like to hear about and we'll try to answer
22 those issues at least briefly.

23 I'm joined by a lot of NRC staff. And I'd
24 really like the NRC staff that are with me this evening
25 to stand up.

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1 I do this because we wanted to bring
2 expertise to bear. We felt this meeting was important
3 enough to have the right people here. We have people
4 from headquarters, from the regions, Region IV, and we
5 thank them for being here.

6 And over the course of the evening, some of
7 them will be participating. Thanks, guys. We can sit
8 down and take it easy, but over the course of the evening
9 some of them will be joining in with answers to questions.

10 We will take a break. You can catch one of
11 them if you have a question that you don't want to go
12 through the trouble of having the microphone in your
13 face, but you can say, hey, I'd really like to know
14 something more about that. So, they're all here and
15 they're all willing to talk to you.

16 We also have some folks from California.
17 We actually have people here from the California Public
18 Utility Commission, the California Energy Commission,
19 the California Coastal Commission, the California
20 Department of Public Health, California Emergency
21 Services and also representatives from the United States
22 Navy because of Camp Pendleton.

23 And so, some of them are here this evening
24 because there may be questions that you have that are not
25 within the NRC jurisdiction. And so, we want to have the

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1 right type of expertise here to turn to for those kinds
2 of questions as well.

3 So, we thank all of those folks for being
4 here from the State of California and their various
5 organizations and we'll turn to them as need be, or they
6 may even hear a question and they know it's best for them
7 to be involved.

8 Okay. What I want to start with is our
9 mission. The slide you see in front of you depicts the
10 NRC's mission which is to regulate the Nation's civilian
11 use of radioactive materials, to protect public health
12 and safety, promote common defense and security and
13 protect the environment. That is our mission.

14 When a facility such as nuclear power plants
15 and other nuclear facilities are operating, it remains
16 our mission during the decommissioning of nuclear
17 facilities.

18 First and foremost our mission is safety.
19 We are an independent Federal regulator and our business
20 is all about protecting public health and safety. That
21 will remain throughout the process of decommissioning
22 until it is complete.

23 What you see in front of you is the
24 regulation that cites our decommissioning criteria. It
25 doesn't matter about that. What is important is

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1 explained to you when we use the term "decommissioning,"
2 what does it mean?

3 It means to remove a facility, in this case
4 a nuclear power plant, safely from service and reduce
5 radioactivity to a level that allows either release of
6 that property for unrestricted use and termination of the
7 license or reduction of the license in the case of a
8 nuclear power plant to spent nuclear fuel storage, or
9 release of the property under restricted conditions and
10 termination of the license.

11 I will point out that while our regulations
12 for decommissioning allow restricted release, no nuclear
13 power plant that has been decommissioned in the United
14 States has pursued restricted release. All have been
15 successfully completed using unrestricted release.

16 The slide that I have here for you is
17 designed to share with you the kind of scientific and
18 technical expertise that will be brought to bear by the
19 Nuclear Regulatory Commission as we address the
20 decommissioning of SONGS 2 and 3.

21 You'll see that there is a lot of different
22 expertise such as mechanical engineers and chemical
23 engineers and geologists, mathematicians, biologists,
24 environmental engineers and so forth and so on. And the
25 point is all of this expertise is brought to bear in the

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1 decommissioning of our nuclear facilities including what
2 takes place on the site that we're here to discuss
3 tonight.

4 I would also point out that the
5 decommissioning staff that Bruce directs as the branch
6 chief has over 300 years of cumulative professional
7 expertise in dealing with the decommissioning of nuclear
8 power plants. So, we hope that that will inspire some
9 confidence in our decommissioning process and you can
10 have some realization of the type of expertise and the
11 experience that will be brought to bear and the oversight
12 of the decommissioning of the SONGS facility.

13 This slide depicts the successful
14 decommissioning completions that have taken place over
15 the last 15 years. A lot of information to try to absorb,
16 but I'll summarize it for you.

17 There have been 50 materials licensee
18 sites. Materials licensee sites are sites that, for
19 example, processed or produced uranium or thorium for
20 various industrial uses.

21 We have decommissioned 11 nuclear power
22 plants, 13 research and test reactors and a large number
23 of uranium recovery facilities. On the order of 80 sites
24 have been decommissioned successfully over the past 15
25 years under Nuclear Regulatory Commission oversight.

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1 What we have here is a list of the nuclear
2 power plants that have been decommissioned. I mentioned
3 a moment ago that there were 11 of them.

4 You'll see that the ones that are depicted
5 in yellow have been depicted under what's called the
6 License Termination Rule which went into effect in 1997.

7 The ones in white below that were
8 decommissioned by an earlier standard before our
9 existing standard in the License Termination Rule. That
10 rule is the standard by which the decommissioning will
11 take place at the SONGS facility. So, 11 nuclear power
12 plants in the United States decommissioned thus far.

13 What we have here is key decommissioning
14 milestones. Now, Bruce in his presentation will go into
15 the process in considerable detail, but I thought it was
16 worthwhile to at least share with you some of the major
17 milestones you can begin to think about and be aware of
18 as Bruce goes through this presentation.

19 First you'll see that there are two
20 certifications that have to be filed by the utility. A
21 certification whereby there has been a permanent
22 cessation of operations, and a certification where the
23 nuclear fuel has been permanently removed from the
24 reactor. Both of those have been filed by the utility
25 operating the SONGS facility.

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1 Next is a Post Shutdown Decommissioning
2 Activities Report. A PSDAR you will hear us say and
3 refer to.

4 Then comes decommissioning and
5 environmental remediation. I have that activity
6 highlighted in yellow, as well as a little bit further
7 down, the final status survey, because that represents
8 activity that takes place on the site. That's not a
9 submission to the Nuclear Regulatory Commission.
10 That's actual remediation and decommissioning of the
11 facility.

12 There is a requirement that a license
13 termination plan be submitted along the way. Of course
14 the final status survey whereby the operator of the
15 utility is ensuring through surveys that the dose
16 standard that I'll mention to you in a moment is, in fact,
17 satisfied.

18 The Nuclear Regulatory Commission also does
19 a confirmatory survey of the results within the final
20 status survey.

21 And last, but not least, is either a
22 termination of the Part 50 license - Part 50 is that part
23 of our regulations under which nuclear power plants are
24 regulates - or as is more common today, the license is
25 shrunk in size to the footprint of the remaining

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1 independent spent fuel storage installation.

2 In terms of release criteria, I mentioned
3 that there are two possible pathways for release of any
4 facility that undergoes decommissioning, including
5 nuclear power plants. There's unrestricted release,
6 and restricted release.

7 As I mentioned, no nuclear power plant thus
8 far has gone for restricted release for a myriad of
9 reasons. All have pursued unrestricted release
10 although they certainly could pursue restricted release.

11 There's a lot of information on this slide,
12 but I want to draw your attention to just two points.

13 The dose criteria that we use in this
14 regulation is referred to as total effective dose
15 equivalent of equal to or less than 25 millirem and as
16 low as reasonably achievable.

17 In other words, the site must be cleaned up
18 to satisfy that dose standard and the licensee must
19 demonstrate that the level to which it has cleaned up the
20 site is, in fact, as low as reasonably achievable based
21 upon a rather sophisticated cost benefit analysis.

22 Now, when you see and you hear 25 millirem,
23 what does that mean? Can I understand what he's saying
24 when he says 25 millirem?

25 Well, let me put it into perspective. When

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1 you get in an airplane in Los Angeles and fly across the
2 country to New York, you receive about 3 millirem of
3 exposure from cosmic radiation.

4 In the United States, the natural
5 background radiation including exposure from medical
6 radiation is on the order of 300 to 600 millirem per year
7 depending upon where you are in the United States.

8 There are places in the world with a natural
9 background radiation, Saskatchewan, Canada comes to
10 mind, for example, where the natural background
11 radiation is 4,000 millirem per year.

12 So, hopefully now when you see 25 millirem
13 and you hear about it in the months to come as we talk
14 about the decommissioning standard, at least you'll have
15 some perspective of what that number means.

16 Tonight for our public meeting I'll be
17 giving you the decommissioning overview. Of course
18 Bruce will talk about the reactor decommissioning
19 process. Blair Spitzberg will talk about the inspection
20 plan. Michael Dusaniwskyj will talk about the
21 decommissioning funding. Blair will then come back and
22 talk about spent fuel management and then of course we'll
23 go to questions and answers and dialog.

24 I would reiterate that these are the primary
25 topics and the purpose for our meeting tonight, but we

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1 also recognize as Chip said and I said earlier and would
2 repeat now, there are other things you might want to talk
3 about.

4 And we'll do the best we can to at least give
5 you brief answers and help us to the extent that we can
6 stay on the purpose of the program, but we're here to
7 answer your questions about other issues as well.

8 In terms of the decommissioning inspection
9 program, you'll hear a lot about this. We do remain very
10 engaged during the decommissioning process and we'll
11 give you some clarification as to the level of resources
12 that will be involved during that process.

13 We also know that another topic that's on
14 people's minds these days is the Waste Confidence
15 Decision Rulemaking and Environmental Impact Statement
16 that the Nuclear Regulatory Commission is currently
17 working on.

18 We do have a representative here from the
19 Waste Confidence Directorate this evening that can
20 answer some questions if that comes up. So, I think we
21 can give you some insights into that as well.

22 Public involvement. Clearly you're very
23 concerned about public involvement and, again, I want to
24 thank you for being here and taking part in what we
25 consider to be a very important part of our regulatory

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1 program.

2 The meeting this evening that we're
3 conducting is not required by our regulations, but we
4 felt it was important to be here.

5 Our chairman is very interested in
6 conveying information, our management is very interested
7 in conveying information, our entire organization wants
8 to convey as much information as we can to the community
9 here, because there's been a lot of very challenging
10 issues and we know that you've had a number of concerns
11 and a lot of interest. So, we decided to hold this
12 process meeting for that purpose.

13 There is a meeting that will take place once
14 the Post Shutdown Decommissioning Activity Report is
15 submitted by the utility. That's required by our
16 regulations.

17 There is a public meeting that will take
18 place once the License Termination Plan is submitted by
19 the utility. That's again required by our regulations.

20 And because the decommissioning program and
21 the approval of the License Termination Plan involves an
22 amendment to the existing license for the utility, there
23 is the opportunity for a hearing within our adjudicatory
24 process as well. So, there are a number of opportunities
25 for public awareness and public involvement along the way

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1 with the decommissioning process.

2 So, I'll stop there and later on will
3 entertain questions, of course. And Bruce Watson, our
4 branch chief for the Decommissioning Branch for Nuclear
5 Power Plants will provide more detail into the areas that
6 I've just touched upon lightly. Thank you very much.

7 MR. WATSON: Well, good evening and thank you
8 for being here. I am Bruce Watson. I'm chief of the
9 Reactor Decommissioning Branch. I'd like to discuss
10 some of our current activities and their requirements for
11 decommissioning nuclear power reactors.

12 I want you to keep in mind that we regulate
13 - the NRC regulates the radiological decommissioning of
14 these sites.

15 There may be other requirements in the
16 decommissioning requirements that were beyond what the
17 NRC requires and those will be addressed by other
18 regulators.

19 In 2013, four power reactors permanently
20 ceased operations and are transitioning from operating
21 status, which is managed by our Office of Nuclear Reactor
22 Regulation and will be transferring to my office and
23 FSME.

24 Each of these reactors are at various stages
25 of decommissioning and are transitioning at their own

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1 rate.

2 In 1997, the NRC implemented 10 CFR 20
3 Subpart E, which is commonly known as the License
4 Termination Rule.

5 It establishes the release criteria for
6 unrestricted and restricted release that Larry Camper
7 just covered.

8 These rules that I'm going over took into
9 account the decommissioning experience we gained from
10 our decommissioning at Saxton and Fort St. Vrain in
11 Colorado.

12 To date, all US reactors had been
13 unrestricted released for use, which means they can be
14 used for any purpose. And this regulation is a
15 risk-informed dose base regulation.

16 10 CFR 50, specifically 10 CFR 50.82 is the
17 License Termination Requirements for power reactors.
18 I'm going to discuss this rule in a regulation in great
19 detail this evening.

20 (Pause in the proceedings.)

21 MR. WATSON: Part 72 deals with the
22 Independent Spent Fuel Storage Installation License,
23 licensing of the ISFSI. It's an important regulation,
24 because it's where the spent fuel goes during the
25 decommissioning process.

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1 All right. The NRC offers three
2 decommissioning options in our guidance, but only two of
3 those have been implemented to date.

4 DECON, or prompt remediation is what it's
5 called in international terms, decommissioning begins
6 shortly after the licensee has prepared the plant for
7 decommissioning.

8 Like I said, we currently have four reactors
9 in DECON; the plant at Humboldt Bay in California, Zion
10 1 and 2 in Illinois and La Crosse in Wisconsin.

11 Regardless of the strategy chosen by the
12 licensee, the preparation for decommissioning typically
13 takes one to two years in order to get the plant prepared
14 for decommissioning.

15 During this time period, the plant will be
16 set up so that the systems are drained, electrical
17 connections are de-energized and that it would
18 facilitate decommissioning and this does take some time.

19 The plant also may include some
20 modifications that will facilitate future
21 decommissioning of the plant.

22 During this time frame, the NRC will
23 generally keep one of the resident inspectors at the site
24 for about a period of a year. And that's to ensure that
25 all the operational issues that were under review during

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1 the process of shutting down are maintained compliant and
2 to make sure that any plant modifications are maintained
3 safely.

4 In the SAFSTOR, or deferred dismantling
5 mode, the plant is placed in safe storage, as we would
6 call it, cold and dark, until the licensee decides to
7 dismantle the plant and the decommissioning of the plant
8 can begin.

9 The licensee may perform some
10 decommissioning activities during this time frame and
11 the NRC will inspect the plant periodically, at least
12 annually, or if the plant is doing some significant
13 decommissioning activities, we will inspect the plant
14 more frequently.

15 Although entombment is an option in our
16 guidance, no power reactors have opted for this option.
17 No US NRC licensed reactors had been entombed, nor have
18 any licensees requested entombment. So, it's really not
19 an option at this point.

20 Our regulations in 10 CFR 50.82 for power
21 reactors are performance-based, they are flexible, and
22 they require that the licensee complete the
23 decommissioning in 60 years.

24 I know you may ask why 60 years. Again, the
25 basis for that 60-year requirement allows the radiation

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1 doses to significantly decrease to about one percent of
2 those which they were when the plant originally shut
3 down.

4 This represents significant radiation
5 exposure savings to the workers who will conduct the
6 decommissioning.

7 It will also reduce the biome of radioactive
8 waste to about ten percent of what it was when the plant
9 was shut down. This is due to radioactive decay.

10 Some of the principal radionuclides in that
11 such as Cobalt-60 will have gone through numerous half
12 lives, approximately ten, where the radiation levels are
13 reduced and the amount of radioactivity is significantly
14 minimized.

15 During this period the Decommissioning Fund
16 can also increase since it's invested and can increase
17 by compound interest.

18 Coincidentally, this 60-year also
19 corresponds to the 20-year license extension for
20 multi-unit facilities. So, the operator can focus on
21 safe operation of the remaining units.

22 This is, in particular, specific to San
23 Onofre, because San Onofre 1 was in SAFSTOR for quite a
24 while. Then, the utility elected to decommission it.
25 It's complete other than the reactor vessel still being

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1 onsite and there was a significant physical
2 differentiation between the operating units in it that
3 allowed that to be done very safely.

4 The NRC policy is that the decommissioning
5 can be formed Day 1 after the plant shuts down and is ready
6 for decommissioning, or at the 50-year point. Because
7 the 60-year point - 50-year point takes into
8 consideration it will take seven to ten years to complete
9 the decommissioning.

10 Again, some of the decision factors
11 licensees use in determining the decommissioning
12 strategy whether it's a multi-unit site as I just
13 discussed, the ability to have the financial fund
14 available - this is important for plants that are
15 prematurely shut down - whether there is access to the
16 radioactive waste disposal capacity, the actual future
17 use of the site - some of these sites are very valuable
18 to the utility in that they do put new generating capacity
19 on the site and this has happened at many of the
20 single-unit facilities.

21 Decisions also that affect the
22 decommissioning strategy are input from the
23 stakeholders. There is a new business model out there.
24 I will let you know that we're - the utility basically
25 transfers the license to a decommissioning company who

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1 does the decommissioning and then returns the fuel and
2 the site back to the utility. This is the current model
3 at Zion.

4 There may be other special circumstances
5 which will affect the licensee's decision on the
6 strategy. Such a special circumstance would be the - for
7 SONGS, would be the US Navy's lease with the utility.

8 There are a number of certifications that
9 come about from the - that are required from - in the
10 initial stages of the decommissioning.

11 First, the licensee will certify that the
12 NRC that within 30 days they will be permanently shutting
13 down. The second certification is that the fuel has been
14 permanently removed from the reactor vessel.

15 At this point, the - after this is
16 completed, the licensee is no longer permitted to operate
17 the reactor or put fuel back in the vessel.

18 Within two years the licensee is required
19 to submit the Post Shutdown Decommissioning Activities
20 Report. As we call it, it's the PSDAR. And that is
21 required to be, like I said, required to be submitted to
22 us two years after cessation of operations.

23 What's in the PSDAR? Well, it basically is
24 comprised of three things. It's a description and
25 schedule for the planned decommissioning activities.

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1 And it describes the strategy that the utility will take
2 for decommissioning.

3 It includes an estimate of the expected
4 decommissioning costs and a discussion on the means for
5 concluding that the environmental impacts associated
6 with the decommissioning have not changed.

7 The NRC will notice the PSDAR in the Federal
8 Register. We will hold a public meeting to discuss the
9 PSDAR and solicit comments from the public.

10 I want to point out that we do not approve
11 the PSDAR. It is merely a letter to us with specific
12 requirements in the regulations that they are to report
13 to us on what their plans are for the site. The licensee
14 may begin decommissioning 90 days after the NRC receives
15 the PSDAR.

16 The next step in the process is that the
17 power reactor - the licensee will perform the
18 decommissioning.

19 The NRC will continue to conduct
20 inspections, as I mentioned. The licensee will submit
21 to us within two years of when they plan to terminate -
22 request termination of the license, the License
23 Termination Plan. And we'll talk about that in much
24 later detail.

25 But in the meantime, the plant can be - can

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1 conduct decommissioning activities within the current
2 license that it - within the license that is issued once
3 the plant is fully defueled. And those are called the
4 defueled tech specs.

5 We will hold a public meeting to discuss the
6 LTP and solicit your comments. And we will also submit
7 - publish that in the Federal Register.

8 What's in the LTP? Well, the LTP is a very
9 large document. It contains a lot of technical detail
10 on how the plant will be decommissioned, finish the
11 decommissioning. It will contain a lot of radiological
12 data, including some dose modeling, and the licensee's
13 plans to complete the site remediation.

14 Probably one of the most important things
15 in the LTP is the description of how the - the detailed
16 plans on how the licensee will conduct the final status
17 surveys or the final surveys of the site to demonstrate
18 that it meets the license criteria.

19 The License Termination Plan contains a
20 description of the end use of the site if the site is going
21 to be restricted use.

22 As I said before, none of the power reactors
23 have requested a restricted use as a final state. All
24 of them have been decommissioned to unrestricted release
25 criteria.

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1 It also will contain an updated
2 site-specific estimate of the remaining decommissioning
3 costs and of course it will supplement the - any
4 supplement to the Environmental Report that was
5 previously issued.

6 the NRC will conduct a full review of the
7 LTP. Initially we will conduct an acceptance review
8 basically to make sure that the major components of the
9 LTP are in the LTP. And then we will perform a detailed
10 technical review. That detailed technical review will
11 take approximately a year to do.

12 If there is missing information or
13 clarifications required, we will issue additional
14 information - request for additional information. And
15 we will hold public meetings - a public meeting. And
16 also with this since it is a major licensing action, the
17 public also has the opportunity for a hearing.

18 Eventually if the LTP meets all our
19 requirements, the NRC will approve the LTP by amending
20 the license. So, the LTP basically becomes part of the
21 license.

22 The licensee will perform the remaining
23 decommissioning activities and we will perform
24 inspections, including independent in-process and
25 confirmatory surveys to verify the licensee's results.

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1 We also employ a contractor, Oak
2 Ridge-Associated Universities, as an independent group
3 to do surveys to verify compliance with the radiological
4 criteria.

5 At the end of the decommissioning, the
6 licensee will submit to us the final Status Survey
7 Reports. They describe the radiological condition in
8 which the site was left.

9 We will continue to perform confirmatory
10 surveys. And if they meet our criteria, we will approve
11 the Final Status Survey Report. We will terminate the
12 license by letter and notice the action in the Federal
13 Register.

14 Keep in mind that the license termination
15 will only occur when the licensee demonstrates to us that
16 they have met the radiological criteria required in the
17 License Termination Plan which is consistent with the
18 regulations.

19 I would just like to briefly discuss the
20 status of San Onofre 2 and 3. Here are the key
21 decommissioning milestones.

22 Obviously the first two were met. And as
23 I mentioned, the deadline for the SONGS PSDAR is actually
24 two years after the shutdown date, which is June 7th,
25 2015. We understand that the licensee has plans to

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1 hopefully do that in 2014.

2 We will notice the PSDAR when it is sent to
3 us to - in the Federal Register and we will hold another
4 public meeting. And of course when the LTP is submitted,
5 we also do the same.

6 One of the key features that happens within
7 the NRC is the transfer of the inspection program.

8 During operations the plant is under the
9 Reactor Oversight Program. It will be transferred to
10 what we call Inspection Manual 2561, which is the Reactor
11 Decommissioning Inspection Program.

12 And Blair Spitzberg will give you some
13 information on that. Thank you.

14 MR. SPITZBERG: Good evening. My name is
15 Blair Spitzberg and I'm the chief of the Fuel Safety and
16 Decommissioning Branch in the Region IV office in
17 Arlington, Texas.

18 Some of you may be aware of the fact that
19 the NRC has four regional offices. And the purpose of
20 these offices were very interesting and it's a very good
21 decision that was made years ago by the Commission to
22 establish regional offices for the basic purpose of
23 conducting the inspections programs associated with our
24 licensees.

25 It's important to do adequate safety

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1 reviews and to license the licensees to undertake the
2 activities that they undertake.

3 In the regional offices where we do
4 inspection, we believe in the axiom of a former president
5 from California, trust, but verify. And that's what we
6 do as inspectors.

7 My inspection branch is a small group of
8 health physicists and engineers and we do inspections of
9 both the decommissioning activities at reactors and
10 non-reactor sites. We also inspect spent fuel storage
11 installations. And we inspect, as well, some fuel cycle
12 facilities.

13 Now, let me show a picture of some sites here
14 that I think would be of interest. On the left you see
15 four sites. And there's a number that - Larry went
16 through a number of them showing reactor sites throughout
17 the country.

18 And on the right-hand side is an aerial
19 photograph showing what they look like at the end of the
20 decommissioning process.

21 As you can see, Connecticut Yankee
22 basically removed the entire site and went to a
23 greenfield, as did Maine Yankee.

24 We show the Trojan, Oregon site there which
25 was decommissioned in Region IV a number of years ago.

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1 And as you can see on the photograph there
2 at San Onofre Unit 1, you may be aware of the fact that
3 there was another operating reactor at San Onofre years
4 ago and they were successfully decommissioned with the
5 exception of the reactor vessel which remains onsite.

6 So, asking the question how NRC ensures
7 safety, as we mentioned and Bruce went through in detail,
8 we establish and ensure compliance with the requirements
9 contained in the regulations, in a number of different
10 safety standards that pertain, decommissioning and
11 storage of spent fuel, and then we also write license
12 conditions and technical specifications that the
13 licensee has to comply with.

14 And all of this is done in the licensing
15 process performed in Washington where they undertake
16 these safety evaluations and all those are subject to
17 public input.

18 And then finally as the inspection
19 enforcement, and that's what we do in the regional
20 offices, we have a - our regional office staff numbers
21 in excess of 150 safety professionals that do various
22 inspections not only of the operating reactors, but of
23 the decommissioned reactors and the nuclear materials
24 licensees that are located basically west of the
25 Mississippi River. That's a large geographic region.

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1 Some of the inspection activities that will
2 be undertaken at San Onofre now that it is permanently
3 defueled and in decommissioning status, is that we will
4 continue to perform inspections of spent fuel pool
5 safety. Because as you know, there's a number of spent
6 fuel assemblies that are still in storage in pools at Unit
7 2 and 3. We'll continue to inspect those.

8 We'll perform decommissioning inspections
9 out here and most of those will be intense during the
10 periods of dismantlement, which probably will not occur
11 for some period of time. But once they start actually
12 dismantling and cutting up systems and deconning the
13 facility, we'll be out here on a regular basis, but will
14 continue to do programmatic inspections up until that
15 time.

16 It's important to note that during the
17 remediation activities the NRC conducts independent
18 radiological measurements. And the purpose of this is
19 to confirm the licensee's results.

20 We inspect the radiological measurements
21 that the licensee performs. We observe them doing the
22 measurements, and then we'll do our own measurements.
23 And in some cases we'll bring out independent
24 laboratories that are contracted to the NRC to perform
25 independent measurements to verify the accuracy of the

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1 licensee's results. And this has been very successful
2 in our inspection program.

3 As I mentioned, we also inspect the safety
4 of the independent spent fuel storage installation, and
5 I'll discuss that in my next presentation in a few
6 minutes. And then we also continue to inspect the
7 physical security program at the site.

8 So, what are the objectives of the
9 inspection program? Basically it's very
10 straightforward.

11 It's to verify safe conduct of the licensee
12 activities. And we've looked at the adequacy the
13 licensee controls, we ensure that safety problems and
14 violations are properly identified and that they're
15 corrected and that effective actions are taken to prevent
16 recurrence.

17 And then we also examined trends in licensee
18 safety performance. And this is something that's very
19 important particularly at - well, at all plants, but we
20 find it important to decommissioning plants as well,
21 because decommissioning plants the licensees quite often
22 will bring in contractors that have special expertise in
23 decommissioning activities.

24 And so, as these contractors come in even
25 though they're regulated under the licensee's program,

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1 we find that we have to look at trends in their
2 performance as well.

3 Next are some of the inspection procedures.
4 These are the core inspection procedures that we will
5 implement during and throughout the inspection program
6 for the decommissioning.

7 They cover everything from the
8 organizational, management and cost controls, the safety
9 reviews, any design changes and modifications to the
10 plant that will be made, the licensee's QA program that
11 includes self-assessments, audits and corrective
12 actions, the safety of the spent fuel, the radiation -
13 occupational radiation exposures to the workers,
14 inspection of final surveys, the radioactive waste
15 treatment, effluent and environmental monitoring
16 program, the transportation of radioactive materials off
17 site, a lot of waste material will be packaged and
18 transported to waste disposal sites out of state mostly,
19 the maintenance and surveillance program, physical
20 security and the contingency response program.

21 So, let me talk just a minute about how we
22 plan our inspections and how we communicate our
23 inspection results.

24 Most of our inspections, we try and lay out
25 an inspection plan for a year in advance. We're not

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1 always going to hold to that inspection schedule, because
2 conditions will change at the plant and activities will
3 be moved up or new activities will be introduced and we
4 have an inspection plan that is something that we can
5 change on short notice to adjust to any activities at the
6 site.

7 We coordinate our inspection plan with a
8 Program Office in Washington and we get their buy-in on
9 what we're planning to do.

10 we work for the Program Office in
11 Washington. So, they're the ones that set our
12 objectives and give us funding to do our job.

13 As I mentioned, we adjust the schedule as
14 needed throughout the year. Then we execute the
15 inspections.

16 The inspections can be announced or
17 unannounced. Most of our inspections are announced, but
18 not always.

19 There may be occasions where we want to do
20 an unannounced inspection in which case we can do - we
21 do backshift inspections and weekend inspections
22 throughout the year.

23 And then as I mentioned, we have - the
24 inspection plans are approved in advance by the NRC
25 management in the region. And then we have exit meetings

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1 following every inspection where we communicate the
2 results of our inspections to the licensee so that they
3 can examine the results and take corrective action if
4 needed.

5 We issue inspection reports. We have two
6 different goals for the timeliness of our inspection
7 reports.

8 For routine inspections involving one or
9 two inspectors, our goals are 30 days for the inspection
10 reports from the date following the exit. For team
11 inspections, it's a 45-day goal for team inspection
12 reports.

13 And then as I mentioned, we do also have an
14 enforcement policy. If we identify violations, we
15 examine the significance of the violation and we get our
16 enforcement staff involved.

17 We have an enforcement staff in the regional
18 office and in our headquarters office and will panel the
19 findings and make a determination of what enforcement to
20 take.

21 We have a number of different enforcement
22 tools that we can take. We're looking ultimately to get
23 the attention of the licensee to correct any violations.

24 If violations are significant according to
25 our enforcement policy, then we have sanctions such as

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1 civil penalties or orders that we can invoke in order to
2 bring about compliance.

3 Some of the other post-inspection
4 activities. When the inspectors return to the office
5 and oftentimes before they return to the office, they'll
6 call me up and they'll brief me on the inspection results.

7 Then, we make a determination collectively,
8 the inspector and the other staff and the management in
9 the regional office as to the significance of the
10 findings.

11 And then we'll issue the inspection report
12 and I've listed here the website address where you can
13 get copies of our inspection reports.

14 Most of our inspection reports are publicly
15 available. For obvious reasons, some minor - few
16 inspection reports are not publicly available for
17 security reasons, but most of the decommissioning
18 inspection reports will be publicly available and you can
19 access them on our website. And then finally, we'll
20 track and follow the inspection findings to closure.

21 MR. DUSANIWSKYJ: Good evening. My name is
22 Michael Dusaniwskyj. I am an economist in the Office of
23 Nuclear Reactor Regulation in the Division of Inspection
24 and Regional Support in the Financial Analysis and
25 International Projects Branch.

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1 There are regulations on financial
2 qualifications, and more importantly on decommissioning
3 funding assurance.

4 These standards are based on regulations
5 that have been involved since the enactment of the Atomic
6 Energy Act of 1954.

7 And ultimately what it is ultimately trying
8 to do is to determine whether it can be built, operated
9 and decommissioned safely. To do that, it takes money.

10 A licensee begins funding for
11 decommissioning when a license is issued. There is a
12 difference between decommissioning funding and
13 decommissioning funding assurance.

14 The regulations at the NRC stipulate that
15 a licensee shall have the necessary funds to decommission
16 to NRC standards by the time the decommissioning
17 activities begin and certainly before it is concluded.

18 Requirements while operating, we are always
19 forecasting the collection process to determine whether
20 or not there is enough funding in the Decommissioning
21 Trust to complete decommissioning to NRC standards.

22 Our basic tool for that is that every two
23 years in odd number of years by March 31st of an
24 odd-numbered year, a licensee is to report to us seven
25 significant pieces of information. Two of them being

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1 what is the minimum amount that is necessary to put aside.
2 And more importantly, how much money has been collected
3 as of December 31st of the year prior to the March 31st
4 submittal.

5 We also do spot checks. We check to make
6 sure that what they have in a decommissioning trust fund
7 is, in fact, in the decommissioning trust fund.

8 Decommissioning funds used, are used
9 directly for the facility to decontaminate and
10 decommission to NRC standards.

11 If it can be proven to us by the licensee,
12 it can also be used indirectly for use on spent fuel
13 management. Any residual funds can be used for site
14 restoration and greenfielding. While they are in
15 decommissioning, we are forecasting the withdrawal
16 process.

17 Actual decommissioning funding assurance
18 status reports come in annually once a licensee has
19 declared that they are, in fact, in decommissioning
20 status.

21 Two things that must be remembered is that
22 as of June 7th, 2013, two clocks have already started.
23 Number 1, the licensee has until for 60 years, to
24 decommission to NRC standards. And, more importantly,
25 we are waiting for the PSDAR to which we can then

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1 determine whether or not there is reasonable assurance
2 that the funding in place will be, in fact, enough to
3 carry on the decommissioning activities as prescribed by
4 the licensee.

5 So, waiting for the PSDAR, we know the
6 following facts and they are listed for you on this slide.

7 Fundamentally as of December 31st, 2012,
8 Unit 2 has almost 1.7 billion dollars set aside for
9 decommissioning. Unit 3 about 1.9 billion.

10 And for comparison, Unit 1 has a remaining
11 trust fund of about 295 million of which there is an
12 estimated cost resulting - excuse me - remaining cost of
13 almost 206 million.

14 The intention of the NRC is not necessarily
15 to claim how many nominal dollars will be involved in the
16 decommissioning process, but my job is to more or less
17 tell the Commission whether or not the purchasing power
18 of those dollars will, in fact, cover all of the
19 decommissioning costs associated with the requirements
20 under NRC regulations.

21 The one thing that I would like to also point
22 out is that of course greenfielding is not under the
23 jurisdiction of the NRC. That is primarily under the
24 jurisdiction of the California Public Utility
25 Commission.

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1 So, until we have a PSDAR, these are the only
2 facts that I can present to you at this time. Thank you.

3 MR. SPITZBERG: Okay. So, you get me one
4 more time, and then we'll open it up to questions. I'd
5 like to speak a few minutes about the regulation of the
6 spent fuel at SONGS.

7 Let me start from basic fundamentals, and
8 that is that spent fuel must have active heat removal in
9 a pool for several years after leaving the operating
10 reactor. After this period of time, it may be passively
11 cooled by air.

12 Spent fuel is being safely stored at San
13 Onofre in fuel pools and in the onsite Independent Spent
14 Fuel Storage Installation.

15 And we use the term "ISFSI" for that long
16 string of words, Independent Spent Fuel Storage
17 Installation. So, if I slip up and use the term "ISFSI,"
18 I apologize.

19 Spent fuel pools are able to withstand the
20 same environmental hazard conditions as the reactors and
21 will be operated by certified fuel handlers who are on
22 shift around the clock.

23 Each spent fuel pool has redundant and
24 independent cooling systems, power supplies, pool water
25 sources and other safety and emergency equipment.

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1 Both the spent fuel pools and the ISFSI are
2 protected by the San Onofre Physical Security Force and
3 its associated security systems.

4 Why do we need an ISFSI at these sites?
5 It's a long story, but I'll try and summarize it. The
6 need for the alternatives to spent fuel pool storage
7 emerged in the 1970s.

8 When these plants were initially designed,
9 it was anticipated and expected that the fuel would be
10 stored in the pools for a number of years to allow it to
11 decay after which it would be packaged up and shipped to
12 a DOE site for disposal.

13 The Nuclear Waste Policy Act of 1982 and the
14 Amendments Act of 1987 laid out a process for licensing
15 a geologic repository. But as most of you know, a
16 geologic repository is still decades away.

17 Dry cask storage was developed to meet the
18 need for expanded onsite storage of the spent fuel due
19 to the lack of a national repository available for use.
20 The ISFSI at SONGS became operational in October 2003.

21 To give you an example that ISFSIs are now
22 in widespread use around the country, this is a map of
23 the US showing all of the nuclear sites, the commercial
24 reactors and some of the non-commercial reactors where
25 no longer commercial reactors exist that have ISFSIs that

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1 are constructed and currently storing spent fuel.

2 Speaking of the SONGS ISFSI, they use a
3 model Transnuclear Advanced NUHOMS Horizontal Storage
4 Module System. The major components of this system are
5 the dry shielded canister, or what we refer to as the DSC,
6 and the horizontal storage module, or the HSM.

7 These photographs depict those. I don't
8 know if I have a pointer on here, but on the left is the
9 dry shielded canister open on one end. This is during
10 the fabrication process.

11 And then the middle photograph is the
12 fabrication process of the horizontal storage module.
13 And then there is a horizontal storage module still under
14 construction there showing with the concrete in place.

15 Each DSC has an outer shell consisting of
16 5/8th-inch thick stainless steel with steel internal
17 spacer discs. The DSC has a welded internal confinement
18 boundary and a separate welded lid.

19 The DSC is placed horizontally inside each
20 advanced horizontal storage module and into a steel
21 support structure. And that's depicted in this
22 photograph here on the transporter in a shielded cask
23 that is especially designed to move these canisters out
24 to the horizontal storage modules on site.

25 The advanced horizontal storage module has

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1 thick steel-reinforced concrete walls that are greater
2 than four feet thick and roof slabs that are about five
3 feet thick. And you saw the reinforcing steel in that
4 structure as it was being constructed, in the previous
5 photograph.

6 And this provides for additional structural
7 protection to the canister and the radiation shielding.

8 The horizontal storage modules set on
9 concrete pads that are steel-reinforced concrete of a
10 minimum thickness of three feet.

11 I know those of you out here in southern
12 California are concerned about seismic conditions. And
13 any of us that have recalled the Fukushima accident are
14 concerned about flooding and tsunami considerations when
15 you live on the ocean. So, let me speak to that with
16 respect to the SONGS ISFSI.

17 The SONGS ISFSI is designed for
18 high-seismicity sites. The design basis earthquake
19 used to analyze the SONGS ISFSI is 2.24 times higher
20 than that used in the licensing of the reactors.

21 For tsunami considerations and flooding,
22 the SONGS ISFSI is located 19.75 feet above sea level.
23 The maximum flood condition of 29 feet was evaluated for
24 the ISFSI, which would potentially put the ISFSI pad
25 under nine feet of water.

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1 The design basis flood for the advanced
2 horizontal storage module design is to withstand a
3 submersion at 50 feet underwater.

4 The maximum tsunami including storm height
5 of the waves was evaluated at 27 feet for the SONGS ISFSI,
6 which is less than the maximum flood conditions evaluated
7 for the site.

8 All these evaluations did not take into
9 credit for the 28-foot sea wall which exists between the
10 ocean and the ISFSI.

11 And finally if the ISFSI were to get
12 temporarily flooded during a tsunami, there would be no
13 adverse thermal effects.

14 Let me talk about how we do the inspection
15 of the spent fuel storage. For the pool, we do routine
16 inspections normally semiannually using an inspection
17 procedure 60801.

18 And the reason I mention the inspection
19 procedure number is that I would invite you all to go onto
20 our website. You can call up these inspection
21 procedures and read them for yourself to see what it is
22 we look at in detail.

23 For the ISFSI inspections, we do ISFSI
24 routine inspections normally once every two years
25 following the guidance contained in the Manual Chapter

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1 2690.

2 And this manual chapter references an
3 assortment of individual inspection procedures that we
4 also implement during that inspection.

5 We attempt to schedule our routine
6 inspections of the ISFSI when there's an active loading
7 campaign in progress.

8 We are not always able to do that. For
9 those ISFSIs that have been fully loaded, we're not able
10 to do that, obviously, but we do make every effort to come
11 out when they're actually loading the cask.

12 And once again I'll reference the website
13 of the NRC where you can find out inspection guidance and
14 NRC inspection reports for the ISFSI.

15 MR. CAMERON: Okay, thank you. Thank you
16 all. Good information for everybody. And before we
17 start the question and answer, I forgot to tell you that
18 if you want to write a question tonight instead of
19 speaking, you can do that. And my colleague Bob Hager
20 who's right in the back of the room, he has these yellow
21 cards. You can write a question and at some point during
22 the night we'll read some of them.

23 And also, we're going to take a ten-minute
24 break around 7:30 and then come back and finish the
25 evening off.

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1 We're going to start the
2 question-and-answer session by going to Gene Stone who's
3 right here. He's the spokesperson for a new coalition
4 of concerned citizen groups. It's the Coalition to
5 Decommission San Onofre.

6 The coalition has taken the time and effort
7 to put together some basic questions about the
8 decommissioning of SONGS. And the NRC appreciates that
9 effort.

10 The questions are from the coalition, but
11 the answers to those questions are for all of you. And
12 I think that a lot of these questions are on everybody's
13 mind.

14 So, I'm going to ask Gene to say a few words
15 about the coalition and to read us the first question.
16 I'll read the second question.

17 We're going to put them up on the screen so
18 that they're easier to understand for all of you. The
19 NRC will then answer two questions and then we're going
20 to go on to all of you to see what else is on everybody's
21 mind out here.

22 We'll come back to the next two coalition
23 questions at some point. Go back to all of you and we'll
24 just continue doing that.

25 And at some point towards the end of the

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1 evening we'll see if there's any follow-up questions to
2 the NRC answers that have been given.

3 And, Gene, could you talk to us a little bit
4 right now? I can hold this, or you can. Whatever you
5 want.

6 MR. STONE: The coalition consists of
7 different citizens here in the southern California area
8 and different groups as well.

9 The Sierra Club is here with us. San
10 Clemente Green, Residents Organized for a Safe
11 Environment. Citizens Oversight Project is here,
12 Women's Occupy and the Peace Resource Center of San Diego
13 are here. And the Sierra Club chapter is the Angeles
14 Chapter, which includes LA and Orange County.

15 So, we are here today in hopes that the NRC
16 will make San Onofre a flagship project for the safe and
17 sane cleanup of America's effort to decommission our old
18 and dangerous nuclear fleet and its highly radioactive
19 problems.

20 The original Manhattan Project brought us
21 to where we are now and it's time for this kind of
22 resources and energies to be put into a new project to
23 rid us of the dangerous, highly dangerous radioactive
24 waste that we have here at SONGS and all the nuclear power
25 plants.

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1 To this end, the coalition to decommission
2 is forming a true citizens oversight committee to watch
3 out for the health and safety of Californians and the
4 workers at the plant during the decommissioning process.

5 Our second goal is to monitor the cost of
6 decommissioning so that the citizens and rate payers of
7 California are not gouged during this process. Most of
8 that obviously will happen with the PUC.

9 So, my first question is, is the NRC willing
10 to recognize and give us, the Coalition to Decommission
11 San Onofre, official status? Will the public have an
12 opportunity to review, comment on significant
13 decommissioning plans, including plant expenditures?

14 MR. CAMERON: Okay, thank you. Thank you,
15 Gene.

16 Larry, would you like to address the first
17 one?

18 (Applause.)

19 MR. CAMPER: Thank you, Gene. Appreciate
20 your comments.

21 The NRC will take that into consideration,
22 absolutely. I think there's a lot of merit in what
23 you're suggesting and I guess I would probably like for
24 you to tell us just a little bit more about how you think
25 that might work or the merit of that type of relationship.

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1 MR. STONE: Well, first I'd like to say
2 before I tell you what I think that might entail, because
3 what that entails is limited by what you say is possible.
4 So, let me start by saying what I think this will do for
5 the NRC to have citizens involved.

6 It will give the credibility to the NRC that
7 the chairman is trying to achieve by openness and dealing
8 with groups like ourselves.

9 It will also lend itself to having our
10 communities at large have interested people who will be
11 there to oversee the safety from a citizen's point of
12 view, not from a technical point of view, but just to keep
13 an eye on to help inform what goes on out there during
14 the process.

15 And we envision doing this through some sort
16 of process where we establish an ongoing group of people
17 that would somehow - and we haven't formulated all these
18 ideas, but like a board of directors and but we want this
19 to be a true citizens oversight.

20 So, we'd like to join with you during
21 inspections with the NRC. Not that we have an eye for
22 a technical point of view, but we - a critical eye and
23 critical thinking from different perspectives brings a
24 whole new light on any story.

25 So, again, how that will manifest will come

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1 from, I'm sure, the chairman and the other commissioners,
2 but we'd like to be part, an active part of participating
3 in the safety of this lengthy process. Thank you.

4 MR. CAMPER: Well, thank you. We hear that.
5 And, like I said, we'll take it under consideration and
6 we'll do that very promptly. Thanks, Gene.

7 MR. CAMERON: Okay. Could we get the second
8 question up on the screen for everybody to see? And this
9 is a multi-part question. So, I'm going to read it and
10 it will be up on the screen for everybody to see.

11 And this is about high burnup fuel. And the
12 question is, high burnup fuel has been used at San Onofre
13 since 1996 we were told by the NRC recently, but we cannot
14 find a public notice of that from the NRC or SEC. Even
15 the union and other workers we have talked to were not
16 aware of its use.

17 Was a notice ever given to the public and
18 workers? Were workers made aware that this high burnup
19 fuel is more than twice as radioactive?

20 And there's a further statement that high
21 burnup fuel is hotter and between two and 158 times more
22 radioactive requiring the waste to be cooled onsite in
23 spent fuel pools for at least 12 to 15 years rather than
24 five years.

25 Does the NRC agree with these statements?

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1 If not, how much more radioactive would the NRC say high
2 burnup is?

3 Edison reported to the CPUC, that's
4 California Public Utilities Commission, they must keep
5 some of their fuel in spent fuel pools for at least 12
6 more years.

7 Why don't we go to the NRC for answers to
8 that before we go to the other parts of the question.
9 And, Blair, are you going to answer that for us?

10 MR. SPITZBERG: I will try. Okay. I'll
11 answer what I can. I'm not from the licensing
12 organization and headquarters that would license the
13 authorization for the high burnup fuel, but what I can
14 tell you is that they have used high burnup fuel.

15 They are authorized for storage casks to
16 contain that high burnup fuel once it's brought out of
17 the pool.

18 I don't have the tech spec requirements here
19 with me and I wasn't able to get them two days ago when
20 I got the question. So, I apologize for not having been
21 able to get the answer to the question about what the
22 storage time in the spent fuel pool must be for the high
23 burnup fuel.

24 I think in general terms high burnup fuel
25 does have to remain in the pool for some period of time

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1 longer than the normal five years for regular fuel.

2 I think seven years is the number that I've
3 seen normally as a figure for high burnup fuel, but it
4 really depends on the level of burnup and what was
5 authorized on the license and I don't have that
6 information.

7 What I can say is that the high burnup fuel
8 will not be loaded into a canister for long-term storage
9 in the ISFSI unless it meets the certificate of
10 compliance for that canister system. And we will
11 inspect that.

12 MR. CAMERON: Okay. Thanks, Blair. I'm
13 going to go through - there's three other parts here and
14 I'm going to read all of them. And then we'll go back
15 to the NRC staff for answers.

16 How does the high burnup fuel affect the
17 decommissioning process at San Onofre? What specific
18 problems does this higher radioactive fuel present for
19 waste storage in fuel pools and dry cask storage at San
20 Onofre and just how much longer will this radiation last?
21 How will decommissioning be impacted by the current
22 onsite storage of the spent fuel?

23 Third part of the question is, we understand
24 the NRC staff is worried about short and long-term waste
25 storage in dry cask of high burnup fuel and has initiated

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1 a new study to determine if it can be safely stored in
2 dry cask.

3 Is this report complete? Will it be
4 released public and when? One of your concerns is that
5 there is no way to monitor what's occurring inside the
6 dry cask.

7 How does the NRC propose to monitor the
8 highly radioactive material in a dry cask? How many
9 casks will be required to safely store all the high burnup
10 fuel that is onsite in both the spent fuel pool and dry
11 casks at San Onofre?

12 MR. SPITZBERG: That's a lot of questions.

13 MR. CAMERON: Okay.

14 MR. SPITZBERG: Let me see if I can attack
15 them one at a time.

16 MR. CAMERON: And just one - how much high
17 burnup fuel is on site in fuel pools and dry casks at San
18 Onofre? Okay.

19 MR. SPITZBERG: Okay. And I will tell you
20 that I worked over the last day and a half with some of
21 our folks from headquarters. So, some of the
22 information I'm relying on to respond to this question
23 is information that they helped to gather while we were
24 traveling out here.

25 What I can say is that the NRC does collect

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1 data on the total amount of spent fuel stored at
2 commercial facilities like SONGS throughout the country.

3 The information and much more concerning
4 the nuclear fuel is available on our website. If you go
5 to our website NRC.gov and look at what - under waste and
6 spent fuel storage, you'll get the webpage with that
7 information.

8 However, for any given facility, the
9 information is considered security-sensitive
10 information and is, therefore, not disclosed to the
11 public as to the amount of spent fuel.

12 You can find this in other publications,
13 though, because I found a publication yesterday called
14 Store Fuel that does have the number of fuel assemblies
15 here at SONGS published.

16 When the last routine ISFSI inspection
17 report was issued in May of - May 20th, 2011, and this
18 is a report that's available on our website, SONGS had
19 loaded 11 canisters that contained at least one fuel
20 assembly that was greater than the criteria for high
21 burnup fuel.

22 I'll mention that criteria to you. I know
23 it won't mean a lot to most of you, but it's anything
24 greater than 45 gigawatt days per metric ton of uranium
25 in the fuel and it basically relates to how long the fuel

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1 was in the reactor at power. And that's what - if you're
2 greater than that number, then it's considered high
3 burnup.

4 Out of the 55 canisters that are loaded on
5 the ISFSI pad currently or at that time of the inspection,
6 the NRC does not maintain records showing how many fuel
7 assemblies have been loaded that were high burnup.

8 However, licensees and certificate holders
9 are required to register each cask with the Nuclear
10 Regulatory Commission under the provisions of Part
11 72.212(b)(2). And the registrations and information
12 contained therein is subject to routine inspection.

13 The NRC does agree that there is currently
14 no way to monitor the behavior of fuel inside a sealed
15 cask. We are actively monitoring the efforts of
16 industry and the Department of energy to better
17 understand fuel aging mechanisms.

18 The DOE is taking an active role in funding
19 the Nuclear Energy University Program projects to look
20 into this issue.

21 In addition, DOE is sponsoring a
22 demonstration test with a variety of high burnup fuels
23 to benchmark their models of the behavior of the fuel and
24 to obtain through monitoring of this cask the temperature
25 and gases evolved, which will tell them how the fuel is

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1 behaving. This demonstration will provide data that
2 monitors the behavior of the spent fuel.

3 It depends on which dry cask storage system
4 is used at San Onofre for the decommissioning effort and
5 when the spent fuel is actually moved to the dry cask
6 storage to the different sizes of casks and the actual
7 heat load being given off by the assemblies that the
8 licensee wants to load into the casks. And this
9 information is not yet available from the licensee on the
10 new casks that they're wanting to put into use.

11 MR. CAMERON: Are you ready for the last part
12 of the question, or do you still have some more on that?

13 MR. SPITZBERG: Is that D?

14 MR. CAMERON: Yeah, this is D. We know that
15 MOX fuel was -

16 MR. SPITZBERG: Okay.

17 MR. CAMERON: - used in Unit 1 and removed
18 from San Onofre to the GE Morris facility in Illinois.

19 How and when was that done and under what
20 permit was that done? If MOX fuel was transported away,
21 can other high burnup fuel be moved from the site in the
22 same way to the same place?

23 MR. SPITZBERG: Okay. the MOX fuel was not
24 moved to GE Morris in Illinois. And what I can say was
25 that between March of 1972 and September 1980, 270 fuel

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1 assemblies were shipped to GE Morris and MOX fuel was not
2 included in these shipments.

3 NRC does not require/retain records of
4 which transportation package was used at that time for
5 the specific shipments.

6 That was a unique shipment. Normally fuel
7 can't be shipped to an intermediate storage facility like
8 GE Morris without specific authorization from the NRC,
9 in which case they were authorized under their license.
10 Those shipments are no longer being conducted, but the
11 MOX fuel was not part of those shipments. The MOX fuel
12 is in storage here at San Onofre.

13 MR. CAMERON: Okay. Thank you, Blair. And
14 we're going to go to other people now. We will be back
15 to the coalition's questions and eventually we're going
16 to go to - for follow-up questions there.

17 And, yes, sir, if you could just introduce
18 yourself to us?

19 MR. CRAYCRAFT: Thank you very much,
20 gentlemen. Thank you for being here with us this evening
21 and allowing the public to respond. It's commendable.
22 Applaud you on the efforts of not only your group, but
23 the entire NRC for progressing what everyone in this room
24 hopes to be a safe and honorable process in the
25 decommissioning.

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1 I have a couple quick questions for you. My
2 name is William Craycraft. I'm a four-term mayor -
3 former mayor of Mission Viejo, California, which is South
4 County's largest city close to SONGS.

5 The first question I have is, given that SCE
6 has decommissioned Number 1, Generator Number 1
7 successfully as I understand what you have shared with
8 us here, were there any problems with that
9 decommissioning process?

10 PARTICIPANT: I'll address that because -

11 MR. CAMERON: Why don't you ask your second
12 question as well?

13 MR. CRAYCRAFT: Okay, I can go that. And
14 were there - the other question is, were there any
15 problems with the decommissioning of Unit Number 1 and
16 have the regulations changed since that decommissioning
17 of Unit Number 1? In other words, something applying to
18 Two and Three?

19 The second question, please, is I heard at
20 the beginning in the introductions that Chip gave that
21 there are a number of state agencies possibly here, maybe
22 another Federal agency representing. What is their
23 function in the decommissioning process? If they could
24 briefly share with everyone here what their
25 responsibility is, please.

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1 Thank you kindly.

2 MR. CAMERON: Okay. Good questions, Bill.

3 And after we get the first one, we're going to go to some
4 of the state agencies so that they can explain that.

5 And NRC staff, you heard the first question.
6 And I think part of the essence of that question also is
7 what lessons have been learned in the decommissioning of
8 San Onofre Unit 1 or other decommissioning experiences
9 since then that you might want to talk about.

10 Blair, you go. And I don't know if Doug
11 Broaddus from NRR wants to say anything, but we're going
12 to leave it to you and then we'll go to the state agencies.

13 Blair.

14 MR. SPITZBERG: Okay. I was the branch
15 chief over decommissioning during the decommissioning of
16 Unit 1. And one of my principal inspectors for the
17 decommissioning of Unit 1 is here tonight, Rob Evans.
18 So, I'll invite him to weigh in if he has any input as
19 well.

20 Unfortunately, in preparation for this
21 meeting I didn't go back and review all the inspection
22 reports from the Unit 1 decommissioning, but I'll rely
23 on my memory as best I can.

24 In my recollection, the decommissioning of
25 Unit 1 went very well and very smoothly and it was pretty

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1 much on schedule.

2 I do remember that there were some routine
3 violations that we identified throughout. I remember
4 one in particular that was what we considered to be a more
5 significant violation that involved a shipment of some
6 liquid radwaste to a disposal site in Utah that had some
7 leakage when it was at a truck stop in Utah.

8 The licensee responded very promptly and
9 they went out there and performed a little bit of decon
10 at the truck stop and reconfigured the waste shipment and
11 got it on its way to the disposal site.

12 And there were no health effects as a result
13 of that, but it was still a leaking shipment, which is
14 unacceptable to us and a violation. So, we did cite the
15 licensee at that time. And I do believe that was what
16 we considered to be escalated enforcement, but I don't
17 think that there were any monetary sanctions because of
18 the good performance history at the time of the
19 decommissioning effort.

20 I think the second part of your question,
21 was there anything unusual that we saw during the
22 decommissioning, I would say that there is not.

23 The one thing that sticks with me is the fact
24 that they have not yet terminated the license there. And
25 one of the principal reasons for that is that the reactor

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1 vessel is still on site in storage and that I know that
2 they had developed plans to grout the reactor vessel and
3 to ship it to a disposal site, I believe, in South
4 Carolina, which was the only open site that could accept
5 that reactor vessel at the time.

6 And I think they had some difficulties and
7 challenges in getting some of the approvals for the right
8 of the way for the transportation of that.

9 They went through several different
10 iterations, as I recall, of different routes that they
11 could pursue. And I think they finally made a decision
12 just to keep it on site until the decommissioning of Units
13 2 and 3. And so, it still rests there today.

14 MR. CAMERON: Okay. Thank you very much,
15 Blair. And, Larry, Bruce?

16 MR. CAMPER: Yeah, I would just footnote that
17 and thanks for the question. There has not been a change
18 in the regulations since Unit 1 underwent
19 decommissioning, but there have been a number of
20 information notices put out by our agency in terms of
21 lessons learned. For example, there's been information
22 put in about how to enhance site characterization that
23 comes to mind.

24 And there have been workshops we've had with
25 industry over the years where we've gone back and looked

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1 at what we now know about decommissioning.

2 So, no regulatory change, but much
3 additional information.

4 MR. CAMERON: Anything else that you want to
5 add, Bruce, on this?

6 MR. WATSON: San Onofre 1 was somewhat unique
7 in that we did what we would call a partial site release
8 under 10 CFR 50.83. And it was determined that the - I
9 believe it's the intake structure which extends out into
10 the ocean was released.

11 And of course it was unconditionally
12 released and it was determined that removal of that
13 particular structure may create more environmental
14 damage than leaving it in place. And so, that was
15 somewhat unique in the decommissioning for Unit 1.

16 MR. CAMERON: Okay, thank you. Let's go to
17 the second part of Mr. - pardon me?

18 MS. RUSEN (phonetic): I'm wondering if I
19 could just follow up. I have a couple of follow-up
20 questions on what was just said.

21 Is that possible rather than moving on?

22 MR. CAMERON: We'll follow up with you later
23 on. We're going to go to the state agencies right now.
24 Thank you.

25 Okay. Second question was about the state

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1 agencies and let me introduce Cynthia Walker from the
2 California Public Utilities Commission and Rob Oglesby
3 from the California Energy Commission.

4 And, Cynthia, do you want to go first and
5 just say a little bit about what the PUC is doing, and
6 then we'll go to Rob. Cynthia.

7 MS. WALKER: So, the California Public
8 Utilities Commission's role in decommissioning is we
9 have oversight of the management of the decommissioning
10 of the funds that are set up for all the decommissioning
11 of the plants and in California.

12 So, there is a separate board. It's all
13 established by commission decision that oversees the
14 investments in the fund.

15 And what we do is, and what we'll be doing
16 with SONGS, is they will be filing an application for
17 their plan for decommissioning and they've forecasted an
18 amount that they are likely to spend, and we will be
19 releasing funds for each of the - as they do the
20 decommissioning and overseeing that process.

21 The fund is pretty substantial at this
22 point. The plan was always to have it that way. Because
23 of the lease with the Navy, there is a requirement that
24 it be a greenfield restoration.

25 So, and then we also establish the rates.

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1 We keep track, make sure that there is funding. As
2 Michael was saying, California is more strict than the
3 NRC in some ways. We have our own - not maybe more
4 strict, but we have additional requirements. And so, we
5 will make sure that there is sufficient funding for the
6 decommissioning as required by the state.

7 MR. OGLESBY: So, I'm Rob Oglesby. I'm the
8 executive director of the California Energy Commission.
9 And the California Energy Commission has been involved
10 with this since the plant was first shut down 20 months
11 or so ago.

12 And our role in the process isn't so much
13 with decommissioning, but it's been to work with our
14 sister agencies to make sure going forward that there is
15 reliable electricity supplied in the absence of SONGS.

16 And over 2012, for example, we worked with
17 our sister agencies, the CPUC, the CAISO, to make sure
18 that we could make system changes in the near term to take
19 care of the summer of 2012. And that included restarting
20 an old power plant in order to give some voltage support,
21 making improvements in transmission and also working to
22 get additional conservation.

23 We made other changes to get through the
24 summer of 2013. Now, with the certainty of this resource
25 not being online, we're working to design plans going

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1 forward to have a stable and reliable supply of energy
2 for this region.

3 MR. CAMERON: Thank you, Cynthia. Thank
4 you, Rob. Let's see what the woman in the red sweater
5 has on her mind and then we'll answer that. And then
6 we'll take a break.

7 If you could just please introduce yourself
8 to us?

9 Ms. RUSEN: Thanks. My name is Mila Rusen.
10 I live in Los Angeles and I have - there were a couple
11 of things that struck, me.

12 One, there was a statement made that there
13 was release of radioactivity during the decommissioning
14 of - that there was a release of radioactivity during some
15 kind of an incident that happened in transporting some
16 of the equipment from Unit 1 and there was an assertion
17 made that there was no health impact. And so, I'd like
18 to know the basis of that assertion.

19 And then, I'd also like to know - someone
20 else stated after that, that there was another release,
21 I think, into the ocean.

22 And so, I want to know about how you can be
23 so sure that there were no health consequences whatsoever
24 as a result of these releases of radiation.

25 MR. CAMERON: Thank you. Thank you very

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1 much. And we're going to see if we can give you some
2 information on that. And perhaps more information can
3 be given during the break to you from the NRC staff, but
4 anybody - who would we suggest address that? Blair?

5 MR. SPITZBERG: I can address that.
6 Although, my memory is vague on this now. And, Bob, you
7 may have to help me is that when we - this would have been
8 a reportable event that we were notified of. And when
9 we get a report like this, we would dispatch an inspector
10 to the site to take surveys of not just the vehicle, but
11 any areas that the vehicle may have leaked to.

12 And my recollection is that based upon the
13 surveys that were conducted and the information that we
14 were able to gather from the route of the vehicle and the
15 circumstances of the leakage, that it was not
16 significant.

17 If you need more details than that, what
18 I'll have to do is find the inspection report that
19 documented our follow-up inspection of that and then we
20 can make sure that you're aware of that. It's on our
21 website.

22 I just think that that was - what was that,
23 Bob? That was bout 2006. Okay. So, that was about
24 eight or nine years ago.

25 MR. CAMERON: And let's see if Bob has

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1 anything to add to that. And I don't want to lose the
2 last part of the question, because I think it's
3 important. It goes to how the NRC does things about how
4 can you be certain that - what process do you use to make
5 sure that - to ascertain whether there is affects or not.
6 And, Bob, you can address -

7 MR. EVANS: Bob Evans. I'm a senior
8 inspector for the NRC. The event occurred in 2006.
9 There was liquid radwaste that was being disposed in
10 Utah.

11 And a vent on the tanker leaked and I
12 understand it leaked on a road. And this occurred in
13 Utah, which is what we call an agreement state. And the
14 state of Utah responded on behalf of the NRC.

15 The licensee at the time dispatched a team,
16 remediated the roadway and just basically it did not
17 create a significant radiological hazard to health and
18 safety.

19 It was an environment release and it was
20 eventually cleaned up.

21 MR. CAMERON: Okay. Thank you and anybody
22 else from the NRC want to add something before we go on
23 break?

24 Bruce and Blair.

25 MR. SPITZBERG: Let me just add one final

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1 point on that.

2 MR. CAMERON: Okay.

3 MR. SPITZBERG: And that is under the
4 transportation regulations from DOT which we enforce
5 when it comes to transportation of radioactive
6 materials, is that certain materials that are
7 radioactive cannot be transported in liquid form if there
8 is above a certain level of radioactivity.

9 And so, for something that's of a liquid
10 nature to be transported in a bulk form like that, it has
11 almost by definition to be a low-level activity.

12 So, that's one of the things that gave us
13 confidence that there were no significant radiological
14 consequences associated with this, but we had to wait
15 until the final surveys and information came in from the
16 inspection team from Utah and that we were able to assess
17 that.

18 Nevertheless, I will say that it was a
19 significant violation to us. It fell into what we call
20 a Severity Level 3 category under our enforcement
21 policies, which is the threshold for when we consider
22 escalated enforcement.

23 And when we consider escalated enforcement,
24 we take into account the significance of it. And we take
25 into account other factors like enforcement history and

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1 other parameters that we go through with our enforcement
2 staff to make a final determination of what enforcement
3 mechanism to use.

4 MR. CAMERON: Okay. Thank you very much.
5 And is it Cynthia? What was your name?

6 MS. RUSEN: Mila.

7 MR. CAMERON: Mila. Okay. Sorry, Mila.
8 We're going to take a break now for ten minutes. I have
9 7:36. And we'll get started again after ten minutes and
10 you can come back at your leisure.

11 (Whereupon, the proceedings went off the
12 record at 7:36 p.m. for a brief recess and went back on
13 the record at 7:46 p.m.)

14 MR. CAMERON: And just let me give you a
15 preview of what we're going to do for the next few minutes
16 at any rate, and then we're going to try to get to the
17 rest of everybody.

18 We have first - and, Bob, just hold off one
19 second. First of all, we have a woman right here who's
20 going to ask a question, okay, but someone asked - there's
21 a video being taken of this meeting. That's going to
22 be the record of the meeting. And I was told that that
23 would be available in a couple of weeks.

24 MR. LANTZ: Maybe less than that, actually.

25 MR. CAMERON: Okay.

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1 MR. LANTZ: Yeah, the video of the meeting
2 tonight, it will be posted on our website. And that
3 should be within about two weeks. And it will also be
4 transcribed so you can read it, if you don't want to watch
5 it.

6 MR. CAMERON: Okay, thanks. That's Ryan
7 Lantz from Region IV.

8 We also were asked the question of who
9 authorizes the use of high burnup fuel. It was in the
10 coalition's question and people weren't sure that we
11 answered that. So, we want to get back to that.

12 The NRC is going to be back out here in ten
13 days or so at the Sheraton to do a public meeting on the
14 draft environmental impact statement on waste
15 confidence.

16 And it's very important for everybody to
17 know about that. And I don't want to - I don't want to
18 let that languish.

19 So, I was going to ask Paul Michalak who's
20 here from the Waste Confidence Directorate at the NRC
21 headquarters in Rockville, Paul, can you just tell people
22 about - a little bit about the meeting, the schedule and
23 everything? And let's get that done now.

24 Paul.

25 MR. MICHALAK: Yes, we're going to be back

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1 here - well, in Carlsbad in Wednesday, October 9th.
2 We're going to be over at the Sheraton.

3 We're going to have an open house between
4 6:00 and 7:00 and we're going to be taking comments from
5 7:00 to 10 o'clock.

6 And that has to do with we've been
7 developing over the last year a Generic Environmental
8 Impact Statement having to do with the continued storage
9 of spent nuclear fuel. That being the time from the end
10 of the license life of a reactor until the fuel is taken
11 then to a mine geologic repository.

12 We have this document out for comment.
13 Went out Friday the 13th in September. September 13th.
14 And the commenting period ends November 27th. So, we're
15 doing a lot of meetings around the country and we start
16 next week.

17 We have a meeting next Tuesday at
18 headquarters that's going to be webcast and then it's
19 also going to be teleconferenced. You can call into that
20 meeting if you couldn't make our October 9th meeting.

21 Then at the end, or near the end of the
22 commenting period on November 14th, Thursday, we're
23 going to have another meeting at headquarters that would
24 also be webcast and teleconferenced and you could also
25 call into that as well if you had comments.

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1 MR. CAMERON: Thank you, Paul. And if
2 you're interested in more information on waste
3 confidence, Paul will be here.

4 MR. MICHALAK: And I'm sorry. We have
5 flyers out on the table with a lot more detailed operation
6 about the October 9th meeting.

7 MR. CAMERON: Okay. Thanks. Thanks, Paul.
8 And after we hear from this woman right here, we're going
9 to go over to Gale and two women over here, okay? So,
10 thank you. Please address us.

11 MS. BORCHMANN: Hello. My name is Patricia
12 Borchmann. I'm a resident in Escondido, San Diego
13 County. And I have family in Carlsbad, I have family in
14 Seal Beach and I consider in, you know, the 8.46 million
15 people within 50 miles of San Onofre, I consider all of
16 you my family. So, that's where I'm coming from.

17 And I, you know, I think that the public
18 expects NRC to fully perform and carry out your duties
19 for public safety. And so, anyway, some of my questions
20 - one of my comments is related to your announcement just
21 now that NRC is going to be having public meetings
22 regarding a Generic Environmental Impact Statement
23 that's going to be prepared.

24 One comment I'll give you up front so you
25 can give your NRC people a head up, I think that the people

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1 in southern California think that a site-specific
2 Environmental Impact Statement as opposed to a Generic
3 Impact Statement would be required given the specific and
4 very important physical circumstances at San Onofre
5 which don't exist elsewhere in the nation.

6 Generic documents don't, you know, provide
7 site-specific assessments and I think that would be a
8 real important -

9 MR. CAMERON: Okay. Thank you, Patricia.

10 MS. BORCHMANN: Okay. Anyway, that wasn't
11 my question.

12 MR. CAMERON: Well, go ahead.

13 MS. BORCHMANN: Thank you for allowing me the
14 time. There's been a lot of discussion by each team
15 member, you know, to convey reasons why the Nuclear
16 Regulatory Commission has such confidence, waste
17 confidence, you know, and that's what this EIS is going
18 to be talking about, but basically confidence in every
19 aspect.

20 Unfortunately, the public here in southern
21 California, we've grown skeptical over a long history of
22 living here near San Onofre and being exposed to, you
23 know, circumstances which we feel impacts have been
24 minimalized, trivialized, marginalized, sanitized and
25 pretty much, you know, comments and concerns of even

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1 independent experts who are engineers, who are, you know,
2 physical scientists, physicists and, you know, highly
3 qualified specialists that they have conclusions that
4 are in contrast with the safety assurances that the NRC,
5 you know, provides us to members of the public because
6 -

7 MR. CAMERON: Patricia, is there a question?

8 MS. BORCHMANN: Okay, yes. For example, the
9 use of high burnup fuel started in 1996. Why is it or
10 what basis for public safety was your approval, the NRC's
11 decision to approve the use of high burnup fuel used when
12 there has been no analysis, there has been no proof,
13 credible proof that the long-term effects will have no
14 significant impact, you know?

15 MR. CAMERON: Okay. Patricia, we're going
16 to - that matches the concern that someone had during the
17 break about the authorization of the high burnup fuel.
18 So, we're going to - let's take that now and then I want
19 to go to Gale and to Larry Kramer and - right here, okay.
20 And then we've got to get Three and Four of the
21 coalition's questions up there.

22 Authorization, Bruce, Blair, you heard the
23 question. How is the use of high burnup fuel at a
24 particular site at this site, how is that authorized?

25 MR. SPITZBERG: Chip, that's authorized by

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1 our Office of Spent Fuel Storage and Transportation.
2 And what they do is they will get an application for a
3 cask for storage of spent fuel. And as part of that
4 application, they'll get all the specifications for the
5 spent fuel including heat load and the type of fuel
6 assemblies and how long the burnup was and a whole
7 assortment of parameters of which I'm not fully aware of
8 all the questions that they ask.

9 They have thermal specialists, they have
10 health physicists, they have structural specialists,
11 they have criticality specialists, they have all these
12 specialists that will review that application.

13 And if that application meets the criteria
14 for licensing that cask, they will approve the cask.
15 Once they approve that cask, they'll certify it. And
16 then that is open to the public comment and to hearings
17 and that process.

18 What they do is they will rely on historic
19 data, a fuel that has been stored in casks of that nature
20 that they have either from the vendors or from licensees
21 or from, in some cases, DOE they have a historic database
22 and models that they use to develop the thermal models
23 and the health physics models associated with that. And
24 that's part of the licensing basis.

25 It's unfortunate we don't have somebody

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1 from a licensing organization that does that licensing
2 that will be able to provide a more detailed answer to
3 that, but that's basically - excuse me?

4 MR. CAMERON: Please, please, please.
5 Please, we're trying to get the answer to your question.
6 Okay? So, just let's please let people try to answer the
7 question.

8 And I think that the issue is you're talking
9 about the use of the cask for it, but I think the question
10 is, is why was high burnup fuel authorized to begin with.

11 We're going to go to Doug Broaddus from the
12 Office of Nuclear Reactor Regulation. Doug.

13 MR. BROADDUS: What I can talk about is the
14 licensing process for fuel. I don't have specifics on
15 the applications that occurred with San Onofre at the
16 time, you know, back in the early '90s.

17 I didn't have a chance to research that yet,
18 but the fuel itself is - there would be an application
19 originally that would be approved with the license
20 originally, the type of fuel that would be used at the
21 reactor site.

22 The manufacturers may come in and want to
23 use different fuel and they'll - or produce different
24 fuel. They'll come in for a - what would be more of a
25 generic type of approval. We would do that through a

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1 topical report. And then that would be approving the
2 design of the fuel itself.

3 And then if each reactor wants to come in
4 and use that fuel at their particular facility, they'd
5 have to come in for a specific - a site-specific amendment
6 request at their site to use that fuel.

7 So, that's the process that's used. And
8 each of those, there would be a licensing amendment and
9 application. There would be an opportunity for public
10 involvement in that, but I don't have the specifics for
11 San Onofre as the one that happened - which one - we can
12 get that information and provide that at a later date.

13 MR. CAMERON: That's the process that was
14 gone through. And you can get specifics on that, okay.
15 Thank you very much, Doug, and we're going to go to Gale
16 and to Mr. Kramer and then we're going to come to you,
17 okay?

18 Gale. Yes, we'll get you in there. We're
19 going to do it a little bit later. Go ahead, Gale.

20 GALE (phonetic): Yes. This is perhaps a
21 very difficult thing to have to face, but I think we need
22 to keep track of the fact that the San Onofre nuclear
23 generating station is on the edge of the ocean and we need
24 to learn lessons from Fukushima also on the edge of the
25 ocean.

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1 One of the things that's happened across the
2 last few years in Orange County is that its entire coast
3 under every municipality from San Clemente to Seal Beach
4 has qualified tsunami ready.

5 SONGS has qualified as something called
6 storm ready, but we've been down there and we've taken
7 a look at their so-called wall. And I really think
8 almost that whatever needs to be kept for a while in
9 cooling ponds needs to be transported to cooling ponds
10 that are further inland or the disaster for the coastal
11 area and a really significant tsunami will be enormous.

12 When you get that radioactive material
13 spread that way, you have Fukushima where they're not
14 trying to take care of even more water that they tried
15 to get out of the picture, because it's become
16 radioactive. So, I bring this problem to your
17 attention.

18 I don't know what the answer is, but I'm not
19 sure that's a good place to put it to sleep to the sound
20 of the waves.

21 MR. CAMERON: Okay. Thank you for that
22 comment, Gale.

23 (Applause.)

24 MR. CAMERON: We're going to go to Councilman
25 Kramer. Councilman Kramer.

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1 MR. KRAMER: Yeah, I'm Larry Kramer. I'm on
2 the City Council of San Juan Capistrano and I've been to
3 I think every meeting that's been held in the last couple
4 years, but I've got a real simple question.

5 I appreciate all the questions and I've
6 learned a lot from all these meetings. I think they're
7 fascinating and I think everybody brings a different
8 perspective as they come in here and it's been very
9 interesting to hear all the different perspectives.

10 I heard something tonight, though, that
11 peaked my interest and I'm curious. On Unit Number 1,
12 the reactor vessel is still there and you had some
13 difficulty shipping it. And now, that method of
14 shipping apparently has gone away.

15 It makes me wonder are there other parts of
16 Unit 1 that are still here, and does that imply that for
17 Units 2 and 3 that the reactor vessels and other primary
18 components may be here for a long time, if not forever.
19 That's my simple question.

20 MR. CAMERON: Simple question, but perhaps
21 the answer isn't. I don't know. Who's going to deal
22 with that one up on the platform?

23 MR. SPITZBERG: I would have to go back and
24 check, but I believe that the only thing remaining of a
25 radiological nature from Unit 1 is the reactor vessel and

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1 the spent fuel.

2 There may be some what we call greater than
3 Class C waste that may have been also containerized and
4 put in their SOC, but I would have to verify that. That's
5 something that has been done at other sites.

6 I'm not aware of any other certainly
7 significant sources from Unit 1 there.

8 MR. CAMERON: Okay. Go ahead, Bruce, and
9 then we'll go to Bob. Go ahead.

10 MR. WATSON: You want to talk about Unit 1?

11 MR. EVANS: Yes.

12 MR. WATSON: Go ahead. I'll follow up with
13 Unit 2 and 3 questions.

14 MR. EVANS: Just as a reminder, Unit 1 shut
15 down in '92. They started decommissioning the DECON
16 mode in 1999. It took about ten years.

17 What they did at the time was what's called
18 phased decommissioning and they basically disposed of
19 everything that was above the surface.

20 At this point in time besides the reactor
21 pressure vessel, there are still some subsurface
22 structures like the foundations of the building are still
23 there with some very low levels of radioactivity and
24 contamination.

25 The idea at the time was, is they were going

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1 to finish the substructures of Unit 1 in conjunction with
2 completing the substructures at Two and Three. And the
3 disposal of the Unit 1 reactor pressure vessel will be
4 disposed at the same time Units 2 and 3 are disposed.

5 So, again, it was called a phased
6 decommissioning.

7 MR. CAMERON: Okay. Thank you very much and
8 - I'm sorry. Go ahead, Bruce.

9 MR. WATSON: I think that with the response
10 to the questions on Unit 2 and 3, Southern California
11 Edison is going to have to make the determination on how
12 they're going to handle those large components.

13 I can give you the example that Trojan were
14 because they had access to the barge traffic on the
15 Columbia River, the reactor vessel was packaged so it
16 could be shipped by barge up to the disposal facility at
17 Hanford.

18 Maine Yankee was the same way. The reactor
19 vessel which is probably the largest component was barged
20 to Barnwell, South Carolina and then up the Savannah
21 River and then carried over land for a distance to get
22 it to the Barnwell disposal facility.

23 Right now Zion 1 and 2 are under inactive
24 decommissioning. Their plan because they are on the
25 Great Lakes and the large components are too big to go

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1 on rail or across the road, their plan is to segment the
2 reactor vessel into small pieces and then ship it in
3 radioactive, you know, approved radioactive transport
4 packages then.

5 So, it's all in the approach in what the
6 infrastructure will support on how you do the
7 decommissioning. Those are things that you have to take
8 into consideration when you put your plan together.

9 And so, again, what I was saying before in
10 this Phase 1 of the decommissioning, they have a number
11 of significant items to evaluate so they can put their
12 plan together and make it effective so they can safely
13 complete the decommissioning and dispose of the
14 materials.

15 MR. CAMERON: Okay. Thank you very much.
16 We're going to go to you. We know there's people out
17 here. We need to get to Three and Four and we have some
18 good written questions, but why don't you go ahead and
19 then we'll see where we are.

20 MS. MAGDA: Hi. I'm Marni Magda from Laguna
21 Beach. I've been attending all the meetings with Elmo
22 Collins and on into the time we are now.

23 I'm very concerned that this latest report
24 on the steam generators lets us know that a little hand
25 slap on something that was known to be dangerous - the

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1 record that southern California Edison has, has shown us
2 over and over again that they worry about profit, not
3 safety. Though, they will always tell us it's safety.

4 I am begging all of you from my heart to help
5 us in southern California. Of the 104 reactors,
6 southern California has a danger that we are more aware
7 of with rising tides, global warming, tsunami.

8 The report just came out about Alaska that
9 would come across our coast. The seawall is not enough.
10 Even if we had it all in dry cask storage 50 feet
11 underground, then it's in saltwater.

12 We must have your help getting final
13 geological disposal dry cask storage that starts today
14 in the kind of dry cask - and I'm going to ask you how
15 we get these, because I've been told you haven't licensed
16 anything transportable.

17 The US Navy is right now having to get its
18 nuclear waste out of Idaho by 2035 that I used to say was
19 forever from now, because tomorrow southern California
20 could die.

21 How do we get casks like the Navy is using
22 and put our money where it needs to go even if it's more
23 expensive.

24 They have 50 of the - oh, I'm sorry, but they
25 will have 400 by 2035 that are final deposit

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1 transportable casks that they will be moving out of
2 Idaho.

3 Can we use those? How do we get them? We
4 must start moving that - those spent fuel ponds are an
5 absolute accident waiting to happen tomorrow. We can't
6 be waiting. Please help us.

7 I hear that it's up to southern California
8 Edison -

9 (Discussion off the record.)

10 MS. MAGDA: Okay, but the PSDAR says that
11 this is all up to Edison. That you don't even approve
12 what they plan.

13 Who do we get involved? How do we get
14 involved to make this change and not let them take 60
15 years?

16 MR. CAMERON: Okay.

17 (Applause.)

18 MR. CAMERON: Can we address the
19 transportation issue?

20 MR. SPITZBERG: Yes.

21 MR. CAMERON: Go ahead.

22 MR. SPITZBERG: Let me take that little piece
23 of the comment. I think I've heard tonight and earlier
24 today some information about whether or not the casks
25 that are used in the dry storage facility at SONGS are

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1 transportable.

2 What I can tell you is that there are
3 currently two models of casks that are in use. They are
4 the 24PT1 and the 24PT4. Both of those have been
5 approved for transport.

6 the 24PT1 canister has been certified for
7 transport under Certificate of Compliance 9255. You can
8 access that on our website. That's the NP 187 Transport
9 Cask.

10 The 24PT4 canister is also certified for
11 transport. And that's under Certificate of Compliance
12 9302. And that's the MP 197 Transportation Cask.

13 The transportation cask for the 32PTH2
14 canister has not yet been approved, but application has
15 been made. They're not authorized yet to load canisters
16 into that canister as yet, but the application has been
17 made by San Onofre. So, that's the status of the
18 transportation.

19 MR. CAMERON: Okay. And let's go to the
20 final part of the question.

21 MR. CAMPER: Well, there was a couple
22 questions embodied within your remarks. Let me try to
23 address the ones that I heard.

24 The PSDAR, the Post Shutdown
25 Decommissioning Activities Report, it is correct that we

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1 don't approve it, but we do review it and we do ask
2 questions.

3 We look for completeness. We look for
4 adequacy. If all of the criteria in our regulations are
5 not addressed - and one of Bruce's slides identified the
6 things that has to be contained within the PSDAR - we will
7 ask questions.

8 And the reason that we don't approve it, but
9 we approve the License Termination Plan, is because the
10 activities carried out in decommissioning have been
11 evaluated within the Environmental Impact Statement and
12 the considerations for licensing and operating a
13 reactor.

14 And the kinds of activities that go on
15 during decommission are considered to be less severe,
16 less risk than the operating reactor conditions, which
17 is the basis for not approving the PSDAR, but I don't want
18 you to go away with the impression that we don't hold the
19 applicant to satisfy all of the criteria that was
20 identified in the slide about the contents of the PSDAR.

21 The 60-year thing just to reiterate
22 something that was in one of Bruce's slides, I mean, the
23 reason that the Commission in the 1996-1997 time frame
24 put into its regulations the 60-year criteria, which is
25 considered to be 50 years for the facility to cool off

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1 in terms of radiation decay and in ten years to dismantle,
2 is because at 50 years the dose to workers is reduced to
3 on the order of one percent of what it would have been
4 had the reactor gone into immediate dismantlement and
5 decommissioning.

6 And the volume of waste that has to be moved
7 out of the community and transported to a waste disposal
8 facility is reduced on the order of ten percent.

9 And what drives that principally is one
10 particular isotope called Cobalt-60 which is a very
11 energetic gamma matter that has a half life of 5.2
12 years-5.7 years.

13 So, in that period of 50 years, it's gone
14 through ten halve lives, which means that radiation
15 contribution has gone away through decay. So, that's
16 the basis for those 60 years.

17 I know that it seems like a long time, but
18 that's the basis.

19 MR. CAMERON: Okay. We have to get you on
20 - here's the deal. Here's the deal is that we can go into
21 depth on any one of these questions.

22 What we're trying to do in the time we have
23 available is to hear as many questions on different
24 topics as we can. I mean, that's just practically what
25 we have to do here, okay? So, we can't just keep

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1 following up on it.

2 MR. CAMPER: There is one question of hers
3 I didn't answer, though.

4 MR. CAMERON: Go ahead.

5 MR. CAMPER: There was another part of your
6 question that needs an answer. You really in the
7 beginning of your comments expressed concerns about the
8 availability or the lack of availability of a high-level
9 repository for where the spent nuclear fuel should go.

10 That is a significant, national issue that
11 continues to play out. The Nuclear Regulatory
12 Commission is charged with certain responsibilities
13 under the Nuclear Waste Policy Act to license the
14 high-level waste repository, but the Department of
15 Energy is charged with developing and seeking
16 authorization for that high-level repository.

17 That matter is ongoing. It has political
18 sensitivities associated with it. It has court -
19 ongoing court proceedings associated with it. There was
20 recently a position issued by one of the courts and the
21 Commission is currently - is evaluating that recent court
22 decree by communicating and asking for comments from the
23 parties that were subject to the hearing about the best
24 way to proceed, but the Nuclear Regulatory Commission
25 will proceed to look at this, you know, come out in a

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1 situation once it starts - it completes gathering its
2 comments that it's undergoing right now.

3 So, it's a very complicated national
4 problem.

5 MR. CAMERON: Do you have something?

6 CHRIS (phonetic): Hi, I'm Chris. I live in
7 San Clemente and I think we're all here because we want
8 just the transparency and to know that this will be safely
9 handled and we're putting our lives in your hands.
10 Almost eight and a half million of us.

11 You did a slide in which you compared how
12 do we get safely from, for example, Connecticut Yankee
13 and San Onofre and so forth and do you - it's a two-part
14 question - do you consider Connecticut Yankee safely in
15 a safe spot? Question 1.

16 MR. WATSON: Yes, absolutely.

17 CHRIS: Okay. And then -

18 MR. WATSON: We've met all our license
19 criteria for license termination. The site was - I guess
20 we want to call it a greenfield in many respects. They
21 did leave some subterranean, I'll call it, foundations
22 which were radiologically clean. And so, the actual
23 decommissioning was completed safely.

24 They do - the state of Connecticut is
25 continuing to monitor some of the groundwater. They did

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1 remove a significant amount of soil, because they did
2 have some underground tankage and piping leakage. Most
3 of that contaminated soil was removed.

4 And so, yes, it did meet our criteria and
5 it will meet our criteria through the future.

6 CHRIS: So, the second part of my question
7 is in a report in my research in 1994, Connecticut Yankee
8 did leak Tritium which is a highly radioactive material.

9 And I guess you are saying that you were able
10 to successfully decon that because there were
11 deteriorating underwater pipes.

12 So, my question and how that correlates on
13 the slide that you put together is, how do we know that
14 San Onofre, the underground pipes are not deteriorating
15 and leaking in the same fashion?

16 MR. WATSON: At Connecticut Yankee they did
17 what they called the big dig, which was remove all the
18 - I'll say most of the contaminated soils. Some of it
19 went to the bedrock which they continue to monitor.

20 At San Onofre they have a groundwater
21 monitoring program. They also investigate any
22 contamination events so that they see that the soil or
23 whatever if they did have some kind of leak would be
24 monitored and assessed.

25 And so, as part of their environmental

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1 report they do do annual environmental monitoring. They
2 do groundwater sampling and other sampling along the site
3 to make sure that these type of events aren't occurring.

4 MR. CAMERON: Okay, thank you. Could we
5 have the coalition questions Three and Four? And I'm
6 going to read them.

7 Will the NRC allow the resale of
8 non-radioactive equipment and secondary side
9 components, turbines, MSRs, heat exchangers? And you
10 can see all that up there. So, will the NRC allow the
11 resale of this?

12 And since some of these are almost new, will
13 they be sold and where will the proceeds go? Is that
14 something that's within our scope?

15 MR. WATSON: As the NRC, we regulate the safe
16 use of radioactive materials. Any of these materials
17 that are not contaminated or have any radioactive
18 material associated with them, the utility or the
19 licensee is free to do whatever they want to with the
20 surplus equipment, scrap steel, whatever it is that they
21 produce as part of the decommissioning.

22 And so, the proceeds from that would be more
23 subject to the California regulators and not the NRC.

24 MR. CAMERON: Okay.

25 MR. WATSON: We don't regulate commerce. We

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1 regulate radioactive materials.

2 MR. CAMERON: All right. And let's go to the
3 California regulator. This is Cynthia Walker.

4 MS. WALKER: So, any proceeds that come from
5 the sale of any of the components of the reactor would
6 actually offset the cost of decommissioning. So, that
7 would be part of what we would be looking at in the
8 decommissioning proceeding.

9 There's also - I just want to mention
10 there's also an investigation that's going on separately
11 that I know many of you who are active are aware of and
12 involved and maybe even have party status.

13 So, there's going to be some overlap, but
14 all of these things are going to be happening and being
15 coordinated together. But, yes, any revenues that are
16 received would then be offset for the decommissioning
17 costs.

18 MR. CAMERON: All right. Thank you very
19 much, Cynthia. The fourth question, could we have that?
20 Oh, there it is.

21 We would like to know if there can be public
22 announcements when any, quote, allowable, unquote, toxic
23 waste is to be re-released into the environment.

24 We would also like to know in general and
25 relative terms that everyone can understand, what the

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1 upper limits are for releasing radiation and toxic
2 chemicals into the environment during the
3 decommissioning process, when were those limits
4 established and what would trigger a process to
5 reevaluate them.

6 So, there is a lot there, but I think that
7 could be pretty simply answered, I hope, Bruce.

8 MR. WATSON: Yes. The regulations for
9 monitoring and the release of radioactive materials from
10 the site, the radioactive effluence, were instituted
11 decades ago in 10 CFR 20.

12 In decommissioning, the regulation still
13 applies if the plant was operating. And so, from that
14 standpoint the radioactive effluence from the plants are
15 continuously monitored and measured. Blair's people
16 will inspect to that to make sure that that is being done.
17 And the utility typically will issue an environmental
18 report reporting the effluence they've had from the
19 plant.

20 Now, the NRC regulates the radiological
21 part of that. Other state or Federal agencies take care
22 of other materials that may be released from the site and
23 they typically have permits for that.

24 So, the state of California may issue
25 permits for the release of other materials that we would

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1 not regulate.

2 MR. CAMERON: Okay, thank you. Thank you
3 very much, Bruce. I think we need to give people on this
4 side of the room a chance.

5 And, Bob, at some point can you read the one
6 question we got about climate change and how that is taken
7 into account? Why don't we go to the woman you're
8 standing next to.

9 PARTICIPANT: Thank you. My question is
10 about NRC oversight during the decommissioning process
11 as two parts.

12 When SONGS was operating, there was an NRC
13 employee who worked on site everyday. Does the NRC use
14 the same approach during decommissioning? And if so,
15 how do onsite staffing and the role of those onsite staff
16 evolve during the various phases of decommissioning?

17 MR. CAMERON: Good. Blair Spitzberg.

18 MR. SPITZBERG: The question relates to
19 basically we have had during the operation of the San
20 Onofre unit, we've had resident inspectors that are based
21 at the site. They work at the site everyday. They have
22 an office there and they are inspecting day in and day
23 out throughout the year.

24 Once the plant shuts down, we will continue
25 to have a resident inspector there at the site for at

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1 least a year, maybe longer. And that person is going to
2 be certified to do decommissioning inspections as well.
3 So, he will be utilized in that capacity.

4 He's already qualified and trained and very
5 seasoned inspector. And we value his input to the
6 inspection process there.

7 Beyond a year I can't speak to whether or
8 not he will remain there or not. It's usually a
9 case-by-case basis and depends on the level of activities
10 at sites and whether we can justify the level of
11 inspection at the site at that time.

12 We also plan to utilize this inspector at
13 some of our other decommissioning inspections in the
14 state of California and elsewhere as well. So, yes, we
15 will have a full-time senior inspector there at site for
16 at least a year.

17 MR. CAMERON: Okay. And, Bob, let's go to
18 your people over there. I think we have four people over
19 here that we'll get to, but let's take care of people on
20 your side of the street.

21 MS. PADD: Yes, my name is Marsha Padd. I'm
22 part of the Group to Decommission San Onofre. And I
23 share the concerns of the previous questioners, but I do
24 have a somewhat different concern.

25 This regards to the safeguards that you

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1 hopefully have in place and will implement with regard
2 to potential security risks in the future that could
3 endanger the integrity of the plant and the safety of the
4 surrounding communities.

5 Regarding the decommissioning process,
6 what kind of safeguards have you planned for the
7 transportation of nuclear waste?

8 This would also include transportation of
9 radioactive material to a permanent depository. And in
10 addition especially with regard to the proliferation of
11 drones and the private sector, private ownership, it's
12 become a hobby nowadays, what safeguards have you
13 implemented and thought about in this area? Thank you.

14 MR. CAMERON: Okay. The concern generally
15 was about security and safeguards, but the questions went
16 to transportation safeguards. And could you just repeat
17 the last part of that so everybody can hear it?

18 Did you say "drones"?

19 MS. PADD: Yes.

20 MR. CAMERON: Okay. All right.

21 MS. PADD: That's a serious problem.

22 MR. CAMERON: Okay. Thank you. And I don't
23 - if anybody knows anything about the drone issue,
24 address that, but can we talk about the security in
25 transportation issue for her?

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1 MR. SPITZBERG: The site will remain under
2 the Physical Security Plan that it has been under during
3 operations. And that will continue into the future.
4 They have a very substantial security force on site and
5 substantial number of security systems.

6 Obviously I can't go into specifics about
7 that, because that's information that we restrict access
8 to. But, nonetheless, it has the security that's
9 equivalent to any of the nuclear sites throughout the
10 country and it will remain that way.

11 What was the second question? The drones.
12 I cannot specifically answer the question to the drones.
13 I don't know whether there's been a risk assessment
14 associated with that or not.

15 MR. CAMERON: Okay. If anybody - go ahead,
16 Larry.

17 MR. CAMPER: I was going to address the waste
18 issue.

19 MR. CAMERON: Okay.

20 MR. CAMPER: With regards to the waste
21 question as you know from earlier discussion this
22 evening, the spent nuclear fuel will remain on site for
23 some period of time either in the pool or in dry cask
24 storage. And so, there's probably nothing more that I
25 can say about that than we've already talked about. I

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1 think we all understand the reasons for that.

2 With regards to the waste, you expressed a
3 question or concern about the waste, when the reactors
4 decommissioned, the majority - we have a waste
5 classification system in our regulations where waste is
6 classified as Class A, Class B, Class C or greater than
7 Class C.

8 When nuclear power plants are
9 decommissioned, by and large the majority of the waste
10 that comes out of decommissioning is Class A waste, which
11 is at the very low end of our risk scale for waste.

12 There is some Class B and some Class C waste.
13 A very small amount of greater than Class C waste which
14 will remain on site in a canister in the independent spent
15 fuel storage installation, but the waste will then be
16 taken in approved canisters for shipping waste and in
17 accordance with Department of Transportation
18 regulations, and will ultimately be disposed of at a
19 commercial disposal facility.

20 It is conceivable, for example, that the
21 waste, especially the Class A waste, which is the
22 majority of waste that comes out of decommissioning,
23 could find its way to the energy solution site in Clive,
24 Utah. It is also possible that it may make its way to
25 the site in Andrews, Texas.

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1 There is also a site in the northwestern
2 United States that's a possibility, but what's important
3 is that the majority of the waste, Class A, it's the
4 low-risk end of waste, transported in approved shipping
5 containers for that type of waste following Department
6 of Transportation regulations and will ultimately be
7 disposed of in a commercially operated disposal
8 facility, which there are four in the United States
9 today.

10 MR. CAMERON: Okay, thank you. And could
11 one of the staff members from the NRC after the meeting,
12 talk in more depth with the woman who asked the question
13 about the drones so that we can try to find more about
14 that.

15 You want to talk to that, Bruce? Go ahead.

16 MR. WATSON: Just briefly discuss this.

17 MR. CAMERON: Okay.

18 MR. WATSON: It's not really my area of
19 expertise, but I think everyone can recall that the
20 assessment for an aircraft hitting a nuclear power plant
21 has been pretty well established and studied and the
22 design in the plant. And that was revisited after the
23 9/11 terrorist attacks.

24 And so, I think the bounding of a drone
25 striking the nuclear facility or the reactor containment

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1 building has been analyzed and it would be well within
2 that safety envelope.

3 MR. CAMERON: Okay, great. Thank you for
4 that. And we're trying to get as many different areas
5 out as possible. And we did security. We had the state
6 regulators talk. We talked about high burnup fuel.

7 We do have a question on another pressing
8 concern and this is climate change, I believe. This was
9 a written question given to us.

10 Bob, would you read that question?

11 MR. HAGER: Chip, yeah. This is one of the
12 written questions and it is, has the effects of climate
13 change been considered? Recent science suggests the
14 rises in sea level from ocean temperature increases and
15 contributions from snow melt. In addition, extreme
16 precipitation events will likely become more common.
17 For example, the hundred-year storm may occur every 50
18 or 75 years.

19 So, how are climate change - how are these
20 climate change variables accounted for during long-term
21 decommissioning?

22 MR. CAMERON: Okay, good question. How does
23 that happen? Larry.

24 MR. CAMPER: Well, there is a generic
25 environmental - and let me make something very clear. We

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1 use the term - Generic Environmental Impact Statement is
2 an NRC vernacular. It's the same thing as a Programmatic
3 Environmental Impact Statement which is a term that's
4 used elsewhere when NEPA, the National Environmental
5 Policy Act, evaluations take place.

6 And sometimes - one of the comments earlier
7 was about a concern about something being generic.
8 That's a criticism we've heard before, but it's just a
9 vernacular that we use for a Programmatic Environmental
10 Impact Statement.

11 But there is a Generic Environmental Impact
12 Statement or Programmatic Environmental Impact
13 Statement that has been prepared by the Agency dealing
14 with decommissioning of nuclear power plants.

15 Also, in the PSDAR the applicant, the
16 licensee, has to provide any update in terms of any
17 environmental consequences that were not considered at
18 the time the site was constructed and the environmental
19 impact statement for that or the Generic Environmental
20 Impact Statement associated with decommissioning of
21 nuclear power plants.

22 One of the things that not only our agency,
23 but all federal agencies as a result of recent Council
24 of Environmental Quality directions is to look at climate
25 change.

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1 And so, the primary impact of
2 decommissioning with regards to climate change is
3 equipment, caterpillars and things of that type that
4 actually move material around while the decommissioning
5 is going on and those emissions and so forth.

6 But any contribution to the climate change
7 via greenhouse gases has been and is evaluated as part
8 of the environmental assessment that we conduct.

9 MR. CAMERON: Okay. Thank you and we have
10 Ray Lutz.

11 MR. LUTZ: Yes, thank you. My name is Ray
12 Lutz with Citizens Oversight and the Coalition to
13 Decommission San Onofre. I am involved with the
14 California Public Utilities Commission investigation
15 that's going on.

16 One of the things that has come up, and this
17 is actually with regard to the decommissioning triennial
18 cost review, has to do with the fact that they say that
19 they haven't had any decommissioning costs approved by
20 the NRC and this is the reason they don't know how much
21 it's going to cost even for Unit 1.

22 So, I'm wondering if the PSDAR has been
23 submitted and approved - or you say you don't approve it,
24 which is a catastrophe, in my view. You guys should
25 review the PSDAR and stamp it "Approved" or "Not

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1 Approved" and put your butt on the line, because we're
2 putting our butt on the line out here.

3 And for you to say we don't approve it is
4 something that takes my breath away. You either approve
5 it, or not approve it, and don't give me this stuff about
6 asking questions.

7 So, Question 1 is, have you received the
8 PSDAR and approved it for Unit 1? Don't go on. I've got
9 a few more questions here.

10 And the License Termination Plan. Now,
11 maybe there's a terminology problem here. Maybe you're
12 saying that they haven't submitted the License
13 Termination Plan yet.

14 Well, when are we going to know how much it's
15 going to cost? Because Unit 1 has been sitting there for
16 many years now and they say in our meeting that they still
17 don't know how much it's going to cost to decommission
18 that as if they haven't started it.

19 I'm wondering also you say these casks can
20 be transported. It seems to me they need to be
21 transported right away.

22 Now, is there an interim location where we
23 can put these casks away from these population centers
24 and in a non-seismic and non-coastal area? So, that's
25 really kind of like my second question there.

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1 So, if you can answer those, I'd appreciate
2 it.

3 MR. CAMERON: Okay. And thank you, Ray.
4 And the staff can quickly reiterate the scheduling things
5 about the PSDAR and all that, but I think Ray's question
6 about the process for the NRC review, Larry, you talked
7 to this a little bit.

8 Can you talk about why there is a review and
9 not an approval, but first can we talk about has there
10 been a submission of the PSDAR or License Termination
11 Plan? Can we just clear that - emphasize that for
12 people?

13 MR. WATSON: For Unit 1.

14 MR. CAMERON: For Unit 1, okay. Unit 1.

15 MR. WATSON: For Unit 1, there was a PSDAR.
16 (Speaking off mic.)

17 MR. WATSON: I don't know that off the top
18 of my head.

19 MR. CAMERON: We'll get you that offline.
20 Go ahead.

21 MR. WATSON: But let me -
22 (Speaking off mic.)

23 MR. CAMERON: Wait one second. One second.
24 Let's let Bruce finish.

25 MR. WATSON: The rationale behind the fact

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1 that we are not required to approve the PSDAR was a
2 Commission decision. It was decided by the five NRC
3 commissioners.

4 MR. CAMERON: Not the present -

5 MR. WATSON: No, not the present Commission,
6 but it was a Commission decision.

7 MR. CAMERON: Okay.

8 MR. WATSON: And the basis for that was that
9 within the realm of decommissioning activities, the
10 licensee could conduct those activities safely within
11 the existing license. And so, that was their basis for
12 that decision.

13 The Commission voted and approved the fact
14 that we would not have to approve a PSDAR, because they
15 could conduct the decommissioning activities safely
16 within the existing license which they already
17 possessed.

18 In other words, they are allowed to do
19 maintenance. They are allowed to do shipment of
20 radioactive materials all during operations. And we
21 expect - and the Commission decided that they could
22 continue with those types of activities which are part
23 of the decommissioning without us approving a PSDAR.
24 Okay?

25 MR. CAMERON: Okay.

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1 MR. WATSON: It may sound funny, but it was
2 a policy decision by the Commission.

3 MR. CAMPER: Well, let me add to that. Let
4 me just add to that.

5 MR. CAMERON: Go ahead, Larry.

6 MR. CAMPER: At the time the Commission made
7 the decision, at the time the Commission made the
8 decision in 1996-1997 time frame that exists today for
9 the decommissioning of reactors, there was a recognition
10 of what Bruce just said. There was also recognition that
11 the expertise that resided within an operating reactor
12 facility was such that it could accommodate
13 decommissioning.

14 The activities of decommissioning were
15 considered to be less severe from a risk standpoint as
16 compared to, if you will, a material site.

17 When a material site, let's say, for
18 example, a facility existed where certain metals like
19 vanadium were processed, but there was uranium and
20 thorium as a consequence, those types of facilities - we
21 call them materials facilities - can't proceed to do
22 decommissioning at all until such time that it's
23 approved.

24 And to a large degree, that's because those
25 types of facilities don't have the expertise. They

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1 don't have the operating experience that nuclear power
2 plants have.

3 So, that was part of the logic that led the
4 Commission to believe that given the point that Bruce
5 made that if they could operate a nuclear power plant and
6 they could ship waste and do those types of things, they
7 could begin the process of identifying how they wanted
8 to decommission that facility. And, therefore, we
9 review, but don't approve the PSDAR.

10 But what's, I think, the most critical
11 component in the decommissioning process is the License
12 Termination Plan, because it is in the License
13 Termination Plan that we do review and approve and which
14 they identify, for example, the final status survey, the
15 concentration of radioactive materials that will remain
16 in the soil that will identify and ensure that they meet
17 the dose standard that I cited during my presentation.

18 So, that is the critical part in terms of
19 what that site is going to ultimately look like in terms
20 of satisfying the dose criteria. And we do review and
21 approve that.

22 MR. CAMERON: Okay. Let's hear what you
23 have to say. And the last part of Ray's question has been
24 a concern that we've heard from others in the audience.
25 In other words, the movement of fuel from the site.

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1 Can we talk a little bit about that before
2 we go on? I have four people over here I want to get to,
3 but go ahead.

4 MR. EVANS: I just wanted to clarify a Unit
5 1 PSDAR was submitted in 1998. And a couple of weeks ago
6 I dug up a hard copy of it and put it into our ADAMS system.

7 So, if you go into the Unit 1 docket file,
8 it should be there, but keep in mind that the Unit 1 PSDAR
9 is kind of like a high-level document. It doesn't
10 provide a tremendous amount of detail. It's just sort
11 of like a management level, this is how we're going to
12 do Unit 1 decommissioning.

13 I was aware that a draft License Termination
14 Plan was developed, but I don't think it was ever
15 submitted to the NRC. I will double-check that, but I
16 don't think the LTP was ever submitted. Drafted, and
17 then that's as far as it got.

18 MR. CAMERON: Okay. Thank you very much.
19 Good information. Can we go to the last issue that Ray
20 raised and it was raised over here?

21 MR. CAMPER: Yeah, the essence of your
22 concern, if I understood correctly, was the idea of
23 moving the spent nuclear fuel away from the coast, away
24 from this site and putting it in some interim storage
25 facility.

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1 In every nuclear power plant that's been
2 decommissioned thus far, there is spent nuclear fuel
3 there in an independent spent fuel storage installation.
4 That's because in the United States today, we as a nation
5 have not solved the issue of the final geological
6 repository for the disposal of spent nuclear fuel.

7 And so, what has happened is the industry
8 has reacted to that by developing the cask storage
9 systems that we've been discussing tonight. That was
10 done out of necessity, because the kinds of actions that
11 were envisioned in the Nuclear Waste Policy Act of 1982
12 and amended a few years later have, in fact, not
13 transpired.

14 With regards to interim storage, there is
15 no interim storage facility in the United States today.

16 Recently the President's Blue Ribbon
17 Commission on America's Nuclear Future undertook an
18 in-depth analysis. And one of the key findings that was
19 contained within that report was that the country should
20 proceed to develop one or more interim storage facilities
21 until such time as the high-level repository issue could
22 be addressed.

23 Currently, the contents of that report are
24 under consideration by the Congress. Certain
25 congressional acts would have to transpire if, in fact,

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1 those recommendations were to be successfully carried
2 out.

3 There was several years ago a company called
4 Private Fuel Storage that applied for and did receive a
5 license to operate an interim storage facility in Utah.
6 They underwent an in-depth evaluation by the Nuclear
7 Regulatory Commission, a Safety Evaluation Report was
8 issued, a license was issued, and in-depth Environmental
9 Impact Statement was prepared.

10 However, in the final analysis, that
11 facility for a number of different reasons could not
12 receive authority from the Federal government for the
13 railroad line to be built to that facility. And
14 ultimately that facility did not open for that purpose.

15 And not too long ago, in fact, PFS, Private
16 Fuel Storage, decided they would not proceed with that
17 license activity at all. So, we do not have in the United
18 States today an interim storage facility.

19 Some communities have started to express
20 interest in hosting an interim storage facility. One of
21 the fundamental principles that the Blue Ribbon
22 Commission thought was important was that there should
23 be a buy-in, a stakeholder interest, a community interest
24 in hosting an interim storage facility. Or for that
25 matter, a high-level waste repository.

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1 There is a county in New Mexico that has,
2 in fact, written a letter to us indicating that they have
3 a strong interest in submitting an application for an
4 interim storage facility.

5 There's some movement in Mississippi around
6 the possibility of hosting an interim storage facility.
7 And there's some interest in South Carolina as well at
8 the Savannah River site.

9 So, we'll have to wait and see what happens
10 with regards to an interim storage facility becoming a
11 reality for this fuel to be removed not only from the
12 SONGS facility, but from other facilities that have
13 undergone decommissioning and currently have spent
14 nuclear fuel in dry cask storage or, for that matter, what
15 the United States is going to ultimately do about, in
16 fact, developing a high-level repository.

17 I wish I could paint a prettier picture than
18 that, but that is reality.

19 MR. CAMERON: Okay, thank you. We're going
20 to go here, then the gentleman in the green hat, to white
21 shirts, and then the gentleman back there.

22 Dave.

23 MR. WEISMAN: David Weisman, Alliance for
24 Nuclear Responsibility. To follow on to that and the
25 concerns raised about this, may we look at the

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1 intermediate step, which would be the expedited removal
2 of spent fuel from the pools with an inherent
3 vulnerability at least to the dry cask storage even as
4 it should exist at the site on an expedited matter.

5 Now, I know this is a subject for national
6 discussion, Tier 3 Post-Fukushima Recommendation on
7 Expedited Transfer of Spent Fuel, and that's being
8 discussed at a national level, but we have state
9 regulators here today.

10 Mr. Oglesby's agency, the California Energy
11 Commission, has been recommending every year since 2008
12 that the utilities undertake the expedited removal of
13 spent fuel from the pools and place them in dry casks in
14 that matter.

15 The Public Utilities Commission would hold
16 the purse strings on the decommissioning funding being
17 used for that purpose.

18 In fact, I raise that question because in
19 a request for additional information that came out on
20 this, the question the NRC asked was, please specify if
21 any of the accumulated fund balances for
22 non-radiological decommissioning costs such as spent
23 fuel management or other non-radiological
24 decommissioning activities.

25 Now, they may just be asking the costs, but

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1 I hope they're not attempting to imply, and you alluded
2 to this earlier, that money can be moved around within
3 categories for parts of the decommissioning.

4 Should our state recommend it and wish them
5 to do it? And should our state's public utilities
6 commission say we think that's a fine use of the money.
7 Any intent by the NRC to put any brakes on the state of
8 California proceeding with that irrespective of your
9 national Tier 3 spent fuel movement issues?

10 MR. CAMERON: Thank you.

11 MR. DUSANIWSKYJ: I believe that the
12 document you have in your hand was a result of the
13 Biannual Decommissioning Funding Report that was
14 submitted by all the licensees back on March 31st of this
15 year.

16 What we were asking was specifically to
17 determine that the amount that was stated in that report,
18 and I have a copy of it here with me, was, in fact, the
19 amount of money that they have stated is dedicated to the
20 NRC's requirements for decommissioning.

21 So, we were asking that question to verify
22 that, in fact, that the statements in the March 31st
23 submittal were, in fact, what was supposed to have been
24 stated.

25 In determining what you've also proposed as

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1 to whether or not money can be shifted around in whatever
2 manner you want to call it, there is a certain sequence
3 of events that will probably have to take place in any
4 decommissioning activity.

5 First and foremost being that the licensee
6 shall have to decontaminate that facility before you
7 start to even begin to think about greenfielding.

8 And the basic answer to that question is
9 that once the decommissioning to the NRC standards has
10 been completed, the NRC has no jurisdiction over that
11 money and the licensee is free to use that money for
12 whatever additional decommissioning can be anticipated
13 with the funds that have been indicated to us in the March
14 31st submittal.

15 MR. CAMERON: Okay, thank you. Yes, sir.
16 Please, David, we're going to have to go on.

17 MR. GARDNER: Hi, I'm Richard Gardner. Just
18 some maybe answers or some questions I have. One would
19 be out of all the nuclear facilities in the United States,
20 how many pounds or cubic yards or the volume of waste?
21 And then I know it's following an exponential decay, you
22 know, curve so that in time it will be less and less. So,
23 and then on the other hand I'm thinking about the NRC and
24 your staffing level.

25 So, what year do you think the most number

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1 of nuclear plants will be decommissioned and you'll have
2 the most amount of fuel to deal with? You'll need
3 inspectors.

4 Now, out of the 96 I think that are
5 operating, you know, there will be some day ten years out,
6 15, where you're going to have 25 decommissioning
7 facilities and it will be, you know, hopefully there will
8 be some more really choreographed, orchestrated, you
9 know, national approach to doing this so that it isn't
10 purely in the hands of utility companies with separate
11 branches of new people that are working. You know what
12 I'm saying?

13 Even though I have great confidence in the
14 NRC, I'm thinking this somehow could be standardized.
15 Maybe you already have a standard review plan for
16 decommissioning in place.

17 MR. CAMERON: Thanks, David. Larry.

18 MR. CAMPER: A lot of interesting things in
19 your comments. Thank you. NEI, the Nuclear Energy
20 Institute, there's a graphic that comes to mind that I've
21 seen several times, but they did put it together just a
22 few years ago. I want to say like three or four years
23 ago.

24 But it showed at that time the next bow wave
25 of decommissioning, if you would, when the Class A and

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1 some Class B and Class C waste would be created because
2 of reactor decommissioning, was in the 2035 to 2045
3 period.

4 Now, that peak has changed slightly in the
5 last few years because there has been renewals of power
6 plants that wasn't anticipated at that time. So - but
7 I still think it's fair to say that the next bow wave of
8 decommissioning is in the 2035 to 2055 period and the fact
9 of the matter is that at some point they're all going to
10 have to come down. They're all going to decommissioning
11 at some point. That's in some ways, that's a long time
12 from now. And in some ways, it's tomorrow.

13 What we're trying to do about tomorrow, if
14 you will, is memorialize and capture all the information
15 that we can about the decommissioning we've already done,
16 the 11 nuclear power plants that I showed in my slide,
17 you know. Now, we've had five units go into sudden
18 announced decommissioning in the last year. There may
19 be others.

20 So, what we're trying to do is, is capture
21 as much information as we can for those who will follow
22 us doing the decommissioning in that 2035 to 2050 time
23 frame.

24 But we do have a standardized review
25 process, we have an extensive amount of guidance that we

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1 have put together to facilitate decommissioning in the
2 future. We continue to take lessons learned and put out
3 information and/or modify our guidance.

4 I can tell you that the staff right now is
5 already starting to look at in view of the fact that five
6 units are going to decommissioning recently, maybe
7 others, the staff is already starting to look at what we
8 think is a very successful decommissioning program as
9 witnessed by the number of facilities available for
10 decommissioning, but we're also starting to already look
11 at are there any changes we need to make to the program,
12 are there lessons learned from what we've done and make
13 some adjustments.

14 And we do plan to communicate with our
15 commission about it, because the Commission has a lot of
16 interest in it as well.

17 MR. CAMERON: Thank you very much. Yes,
18 sir.

19 MR. CHRISTMAN: Good evening. Thank you for
20 your patience and perseverance. My name is Patrick
21 Christman. I'm the assistant chief of staff for Marine
22 Corps Installations West Camp Pendleton.

23 I'd like to ask a question. Camp Pendleton
24 has one of the largest environmental staffs in the whole
25 Marine Corps and one of the largest budgets.

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1 Obviously that's because of the unique
2 challenges of dealing with the California regulatory
3 scheme. We've heard from the PUC and the CEC tonight.

4 Could you please talk a little bit about
5 your interaction through the NRC process with the other
6 state agencies such as the Coastal Commission or Cal/EPA
7 or any of those other folks that we have to deal with on
8 a regular basis? Thank you.

9 MR. CAMERON: Thank you. Larry, are you
10 going to -

11 MR. CAMPER: Well, whether it be California
12 or any other states where decommissioning takes place,
13 there are state laws and regulations that the operator
14 of the facility has to satisfy.

15 I mean, for example, a little bit earlier
16 we were talking about discharge permits, but that's a
17 state function or EPA or depending on how it's been
18 delegated to the state function.

19 We do interface with those state agencies
20 along the way. They are carrying out their regulatory
21 responsibility. We're carrying out our regulatory
22 responsibility. There's a lot of communication that
23 goes on, but let me say this and I'll give you an example.

24 Even though the nuclear power plants are
25 authorized to operate under our Part 50 license and even

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1 though they are subject to our regulations in
2 decommissioning, one of the things we always say to the
3 utilities is you need to make sure that you understand
4 what your state requirements are wherever they may be.
5 Because that's the last jurisdiction you're going to be
6 facing.

7 Even if you successfully decommission the
8 reactor under our regulations, some states even though
9 we have a federal standard in our regulations that I
10 shared with you earlier, some states have developed their
11 own decommissioning criteria for nuclear power plants.
12 Maine comes to mind. Connecticut comes to mind.

13 Connecticut developed a 19 millirem
14 standard as compared to our 25 millirem and ALARA
15 standard. So, the licensee has to deal with the state
16 agencies and recognize those requirements, but we do
17 communicate with the state agencies throughout the
18 process, but each of us are caring in our respective
19 regulatory regimes.

20 MR. CAMERON: Okay, thank you. Thank you.
21 We have this gentleman right here and then we're going
22 to go over to right here. Yes, sir.

23 MR. FAWCETT: My name is Ed Fawcett. I'm
24 president of the Costa Mesa Chamber of Commerce. I've
25 attended several of these public hearings pertaining to

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1 SONGS and wrote in support of Edison's safe restart of
2 Unit 2 reactor.

3 I say "wrote," because there never previous
4 to tonight, there was never a time for anybody on this
5 side to make a statement on behalf of the - voice an
6 opinion.

7 Yet again I'm spending quite a bit of time
8 watching without great humor, another spectacle that
9 leaves me both baffled and disheartened in our elected
10 and appointed leaders.

11 Whose hearing is this? The NRC has again
12 allowed a handful of anti-nuclear activists to have
13 center stage obviously on the agenda without being
14 written in the agenda just dominating the proceeding.

15 My question followed by a brief comment, why
16 hasn't the NRC provided the same air time to those who
17 support nuclear energy and have previously supported the
18 safe restart of SONGS?

19 While we're waiting for NRC to do its job
20 and make the decision, SCE was required to keep SONGS
21 operation-ready. The cost of about a million dollars a
22 day.

23 Due to mounting costs, SCE finally had to
24 make the good business decision to retire SONGS after
25 more than 500 million dollars in cost runup.

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1 As a business person and Chamber person, I
2 can easily understand SCE's need to make this decision
3 to stop the growing cost to taxpayers and to ratepayers.

4 Why can't the NRC make decisions in a
5 reasonable amount of time without hiding behind a lot of
6 public opinion, multiple hearings - and just multiple
7 hearings? Thank you.

8 MR. CAMERON: Thank you for that comment.
9 And I think that just your reading that statement
10 provided air time to others who feel a different way, but
11 part of the explanation, I have to repeat this again, is
12 that the questions that we got from the coalition of
13 citizen groups are questions that are on a lot of people's
14 minds or should be on a lot of people's minds. And that's
15 why we started with that.

16 We're going to go to this gentleman right
17 here. Yes, sir.

18 MR. NELSON: Hi. My name is Douglas Nelson.
19 I'm from up the coast with a company, my own company
20 called Levitical Network.

21 I wrote down as a follow-up to Dale's
22 eloquent question to what extent is the NRC interested
23 in either prolonging or quickly executing the
24 decommissioning of the San Onofre reactor, this meeting
25 only seems to be prolonging the process of

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1 decommissioning with each passing day and the failure to
2 shut down the second and third units.

3 As was mentioned by the councilman earlier,
4 the reactor remains open to natural catastrophic
5 occurrences.

6 Is it because of Cobalt-60 as was mentioned
7 earlier, or is it due to the use to use more money of your
8 annual billion dollar budget that we, the taxpayers,
9 generate?

10 In addition to that, it's ironic perhaps
11 that we generate through our taxes a billion dollars for
12 NRC for its billion dollar budget, but the tax - the taxes
13 that have been created are now diminishing for the
14 individuals who have been unemployed at the San Onofre.
15 And so, there appears to be, I think, a conflict, if you
16 will.

17 We're spending our tax dollars to have these
18 kind of meetings in large places where only two or three
19 people show up, and yet there are individuals whose tax
20 dollars are being used who are no longer employed by the
21 San Onofre reactor.

22 So, I would appreciate a response to that.

23 MR. CAMERON: And, Larry, there was a lot
24 there, but maybe one simple way to clarify something as
25 you might talk about how the NRC budget gets made up.

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1 MR. CAMPER: Yeah, I was going to -

2 MR. CAMERON: Okay, thank you.

3 MR. CAMPER: Thank you, Chip, and thank you
4 for the question. From our standpoint, we don't want to
5 prolong or necessary expedite the decommissioning.
6 What we have to do as a staff is carry out the regulatory
7 construct that has been created by our commission as to
8 how nuclear power plants will be decommissioned.

9 And as I explained earlier and other members
10 of the staff have pointed out, the basis for this 60
11 years.

12 Now, we understand that 60 years sounds like
13 a long time. We get that, but there is a technical basis
14 behind it and a risk basis behind it that led to and
15 supported the Commission decision that was made in the
16 1996-1997 time frame.

17 But with regards to the billion dollar
18 budget and the taxpayers and so forth, I understand that
19 concern, but it's also important to point out that the
20 Nuclear Regulatory Commission is a fee recovery agency.

21 The industry pays for 90 percent of the NRC
22 budget. And the things that we do through fee recovery
23 whether it be the annual fees that we charge or the fees
24 that we charge for review work is borne by the industry.
25 So, only 10 percent or so comes from the general treasury.

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1 And that is a change that congress imposed several years
2 ago now.

3 MR. CAMERON: Okay. We're going over to my
4 colleague. Go ahead.

5 MS. OREN: Hi. Thank you. My name is Mary
6 Oren. I am a Carlsbad resident. Lived in the area for
7 about 30 years. And I want to thank you so much for the
8 chance to share information here tonight. It's been a
9 really great experience.

10 And I'm so grateful for utility contact to
11 see, because my question is really for her. And also the
12 gentleman that is representing energy over there.

13 I think one thing we learned tonight, one
14 reason we're here is it's obvious that big energy
15 installations often bring big problems. And we've seen
16 that with San Onofre.

17 I think some of us are concerned about the
18 natural gas issue with fracking and how that can
19 contaminate water and cause earthquakes and then there's
20 the methane issue.

21 There are bigger installations for wind
22 which can interrupt bird migration. And the bigger
23 solar installations, I guess that's still to be defined
24 whether or not that's going to be dangerous or not.

25 The reason I want to talk tonight is to just

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1 take one moment and look at the big picture. And the big
2 picture means we're all in this together; industry,
3 science, government and citizens. And I think as
4 citizens, it's time that some of us consider taking a
5 bigger part.

6 I'm a solar homeowner. And when I bought
7 my system, my installer said, okay, well, this is how many
8 you need to meet your power use. Don't go over that,
9 because then you won't recoup your cost.

10 So, I'm just one of many out there who hear
11 this everyday still. And it's very disappointing to me
12 because there's businesses and homeowners out there who
13 would be willing to invest in a couple more panels and
14 contribute to more power being available.

15 This is being done in other parts of the
16 world. It's called a feed-in tariff. Germany, France,
17 some places in our country do it where the citizenry is
18 providing clean energy.

19 And in Germany, they do it at the level of
20 50 percent residential solar projection. Here in San
21 Diego, America's finest city, sunshine almost everyday,
22 our percentage is three percent. That's crazy when
23 there's rooftops everywhere and people willing to be a
24 part of the solution.

25 So, as time goes by and we end up in these

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1 kinds of situations where we're all doing our best to
2 qualify, we care, we're all in this together, we are
3 ratepayers, we want more solutions. We want more
4 options.

5 A huge piece of the solution is not
6 happening. We need to make it easier for residents and
7 businesses to invest in solar.

8 So, my question is with our energy contact,
9 what energy is coming in and replace of the nuclear?
10 I've already heard that we don't really need that.

11 And then in terms of the utility, maybe you
12 could please tell me why residents and businesses are not
13 allowed to be a bigger part of this process.

14 MR. CAMERON: Okay.

15 (Applause.)

16 MS. OREN: Thank you so much.

17 MR. CAMERON: Thank you. We're going to go
18 to Rob Oglesby right here on that question.

19 MR. OGLESBY: Well, just really briefly to
20 a very large question related to what we're doing to work
21 around the nuclear power that we don't have any longer,
22 and there are many pieces to it, and about half of the
23 energy - oh, so let me say in terms of the math, 23,000,
24 22,000 and change megawatts from San Onofre gone.

25 But when we look at what we need to do to

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1 work around not having that, it's more than just
2 replacing the wattage from that generation facility.

3 We're looking at things that are called
4 voltage support and reactive power that are kind of like
5 in a water system pressure in the lines.

6 We look at where the generation resources
7 are and what transmission options we have that we can
8 optimize, what we can do to make the system run more
9 efficiently.

10 As we've developed our recommendations for
11 the strategy to go forward, which isn't final, but we've
12 been studying it for some time now and coming up with
13 various options and our website at the Energy Commission
14 you could see a paper and the plan that we put forward
15 as recommendations.

16 But about half of the energy need which also
17 accounts for growth and the phase out of once-through
18 cooling facilities, it's all related, come from what we
19 call preferred resources.

20 And preferred resources include
21 efficiency, which is one of the best alternatives we
22 have, demand response, distributed generation which
23 includes solar, as well as very efficient fast-ramping,
24 clean fossil traditional generation and enhancements to
25 the distribution system and transmission system.

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1 So, I would commend you to look at the
2 recommendations that have been developed by the Energy
3 Commission working with its sister agencies of the CPUC
4 and CAISO, the independent systems operator, and have put
5 forth some scenarios that we're analyzing and will be
6 developing to go not only for how we're going to get by
7 next summer, but going forward in the next several years.

8 In terms of the pricing mechanisms, that's
9 been a very active discussion in California legislature.
10 Feed-in tariffs met energy metering and I can tell you
11 that as one of the agencies that's responsible for
12 attaining 33 percent renewables and sustainable energy
13 in California, we're very enthusiastic about solar and
14 would like to see greater distribution and use of solar.

15 MR. CAMERON: Thank you very much, Rob.
16 We're going to go to two people here. One in the back
17 of the room. And then I'm going to ask Larry Camper to
18 close the meeting out for us.

19 Yes, ma'am.

20 PARTICIPANT: This is so vast and so
21 complicated an issue from the standpoint of the
22 billionaire's control of the - through the energies and
23 the military combined coalition that it's controlling
24 not only our nation, but our world.

25 And those of us who have been putting our

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1 lives into trying to make some protection for our
2 children and grandchildren and possible future
3 generations here for 50 years, no, we know what we're up
4 against and you're just one of the tools of it all, but
5 I think that its time has come for those of you who really
6 understand what's happening to speak out and to do
7 something about it.

8 Because when you talk about two years - I
9 was told that you're giving - I say "you," but it's the
10 commissioners are giving two years to Edison to develop
11 its plan. And it already has dragged along and delayed
12 and delayed in starting the closing of everything from
13 the time the failure took place just trying to stay on
14 the payroll and we understand that.

15 I mean, we can understand that that's
16 important to those people, but it's not your role to help
17 them every step of the way.

18 All through the years the decision has never
19 been made for us. I shouldn't say "never." Never say
20 never, right? But the point is that now you're talking
21 about 60 years.

22 How can anybody comprehend leaving us in the
23 center of the target for the conditions that we have in
24 the world today for 60 years?

25 I live two miles from that plant and I'm

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1 working with a lot of organizations and I know that there
2 are millions of people in this country who understand
3 what - part of what is happening enough that they are
4 trying - they're desperately trying to get you to help
5 us, because we know that you are - your sole
6 responsibility is to protect the public, right?

7 So, we say to you, please stop protecting
8 the industry instead of protecting us.

9 MR. CAMERON: Thank you. Thank you very
10 much.

11 (Applause.)

12 MR. CAMERON: Please introduce yourself to
13 us, sir.

14 MR. STEINMETZ: Hi. My name is Jeff
15 Steinmetz. I'm a resident of San Clemente, California.
16 My question has to deal with the transportation of the
17 high burnup fuel.

18 You did mention a couple of casks that were
19 approved for transportation. But in your sentence and
20 in the sentences leading up to it, you didn't specify that
21 they were approved for the high burnup fuel of the nature
22 that is stored at San Onofre.

23 So, could you please be specific and can you
24 please provide the documentation? Because we've looked
25 for it and we can't find it.

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1 MR. CAMERON: Okay, thank you. Blair.

2 MR. SPITZBERG: Yeah, I thought I did provide
3 the documentation. It's Certificate of Compliance
4 9255, which is for the 24PT1 canister. That's the MP187
5 transport cask.

6 Did you want me to repeat that? I'm sorry.
7 (Speaking off mic.)

8 MR. SPITZBERG: And the second one was the
9 Certificate of Compliance 9302 for the MP197 transport
10 cask. These are available on our website. If you go to
11 our website, you can call these up.

12 MR. CAMERON: Okay. And let's talk further
13 if you need to after the meeting. We have one final
14 comment back there, Bob, and then we're going to go to
15 Larry Camper. Go ahead.

16 MR. HAGER: Yeah, but, Chip, before we go to
17 that, I've got several written questions that we haven't
18 had time to get to.

19 So, if you submitted a written question that
20 hasn't been answered, please stay afterwards and find an
21 NRC staffer who can answer it for you, because I don't
22 want anybody to get away from here and I'm sorry we
23 haven't got to you. So, stick around right after the
24 meeting and we'll get your question answered too.

25 MR. CAMERON: Okay. Pete.

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1 MR. DIETRICH: Yes, thank you. Pete
2 Dietrich with Southern California Edison. Larry, I do
3 have a question and I'm seeking to just ensure that I
4 understand, because I think it is an important
5 clarification.

6 The term "greenfield" has been used here
7 tonight repeatedly. It's not specifically in the
8 presentation materials, but I believe it was mentioned
9 by the staff. And it was also mentioned by Ms. Walker
10 from the California Public Utility Commission.

11 And I think it's important I think we're all
12 aligned that the decommissioning of San Onofre needs to
13 be conducted safely, cost effectively, efficiently and
14 we think that that involves doing it in a very more rapid
15 manner.

16 However, we have to conduct that
17 decommissioning using the decommissioning trust funds
18 that have been set aside to accomplish it.

19 If we're aligned on that point, I think it's
20 important to focus on beginning with the end in mind.

21 What does the end of decommissioning look
22 like? What are the criteria for agreeing that the site
23 has been appropriately decommissioned?

24 I look to seek to understand your
25 perspective. What I heard here tonight is that from a

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1 radiological decommissioning standpoint from a Nuclear
2 Regulatory Commission requirement, we are required to
3 return the land to the ability to be used in an
4 unrestricted manner, which has a specific definition
5 from a radiological standpoint, also per our License
6 Termination Plan which you gentlemen have talked about
7 which has to be submitted and approved, but there is not
8 the term "greenfield" included in the Nuclear Regulatory
9 regulations related to the land restoration requirements
10 for radiological decommissioning; is that correct?

11 MR. CAMPER: That is correct. In fact, Mike
12 in his comments made that point very clear. We do not
13 have a requirement in our regulations that it be
14 greenfield.

15 I do not know what the requirements are in
16 the state of California in that regard.

17 MR. DIETRICH: Right. I appreciate that.
18 And I did have a chance to - go ahead, Larry. Sorry.

19 MR. CAMPER: You also said "restricted." It
20 can be - or "unrestricted." It can be as I pointed out
21 in my comments and Bruce did in his too, our regulations
22 allow unrestricted or restricted.

23 MR. DIETRICH: Right.

24 MR. CAMPER: The 25 millirem dose criteria
25 in ALARA is the same, but restricted has some other

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1 provisions requiring institutional controls and so
2 forth, but no nuclear power plant -

3 MR. DIETRICH: Right.

4 MR. CAMPER: - thus far has opted for the
5 restricted release. In fact, they've cleaned up their
6 site on the order of a few millirem.

7 MR. DIETRICH: That's right. And we intend
8 to proceed for unrestricted use.

9 MR. CAMPER: Right.

10 MR. DIETRICH: That's certainly our
11 intention.

12 MR. CAMPER: Right.

13 MR. DIETRICH: The other point that was made
14 by the CPUC representative was that we would need to
15 return the land to greenfield requirements to meet the
16 requirements of the Department of the Navy.

17 And I was able to catch Ms. Walker at the
18 break and just ask her if her understanding was the same
19 as mine. And that is absent the radiological
20 decommissioning restoration requirements, our
21 requirements are to restore the land to the requirements
22 of the landlord, which is the Department of the Navy.

23 MR. CAMPER: Uh-huh.

24 MR. DIETRICH: So, there is not specifically
25 in any of the restoration requirements for the San Onofre

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1 property either from a radiological standpoint or from
2 a landlord standpoint that some greenfield standard be
3 met.

4 We need to work with the Department of the
5 Navy to ensure that we have restored the property to their
6 satisfaction and meet the radiological requirements of
7 the decommissioning.

8 That's southern California's understanding
9 and we look forward to getting on with it in a safe,
10 cost-effective and efficient manner.

11 MR. CAMERON: Okay, thank you. Thank you,
12 Pete. Okay. Very quickly.

13 MR. STONE: (Speaking off mic) the fact that
14 it's going to take the 60 years and I understand that
15 that's because of the decay rate so that it will be safe
16 to work with.

17 But for those 60 years especially the first
18 30 of those years, that's when the 8.4 million people are
19 at more risk, at the greatest risk. So, that has to be
20 understood as well. And that has to be stated publicly,
21 which is why I'm trying to tell you this right now.

22 You are aware that the greatest danger is
23 now because the decay rate happens over the 30 to 60
24 years, but we're in more danger now.

25 MR. CAMERON: Okay, thank you very much. We

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1 are over time and let's -

2 (Speaking off mic.)

3 MR. CAMERON: Okay, go ahead.

4 PARTICIPANT: I would like to know why -

5 MR. CAMERON: Give her the mic.

6 PARTICIPANT: I'd like to know why these
7 spent fuel pools are not contained in the same way as the
8 reactors and as the dry cask.

9 I mean, outside of the reactor, that is the
10 most dangerous state of the fuel and it has to stay there
11 for up to 15 years.

12 Why are the spent fuel pools not contained
13 in the same way as the reactors and the dry casks when
14 they're going to be exposed to tsunami, earthquake and
15 any other kind of hazard?

16 MR. CAMERON: Okay, thank you. Important to
17 clarify that. Who's going to take - who wants to take
18 that? Doug?

19 MR. BROADDUS: Thanks. The spent fuel pools
20 are not contained in the same manner as the reactor,
21 because the reactor is under extremely high temperatures
22 and pressures so that the containment is there to contain
23 that, those high temperatures and pressures.

24 The pool itself is at ambient temperature
25 and pressure. It's not under those same high

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1 temperatures and pressures. And as such, the risk
2 associated with a release is not the same as in a reactor.

3 The pools, the primary purpose of the pool
4 is to cool and keep the spent fuel cool. It's to maintain
5 cooling circulating around the fuel itself.

6 The fuel is put inside the pool in a manner
7 that it will not reach criticality and go into the same
8 type of reaction as in the reactor core itself. So,
9 criticality is not the issue with the pool. The cooling
10 of the pool - or the fuel itself is the specific issue
11 there.

12 As long as that's maintained, that's the-
13 (Speaking off mic.)

14 MR. BROADDUS: I don't know the thickness off
15 the top of my head, but there's thick stainless steel
16 lining that goes all the way around the pool.

17 The pools themselves are 40 or 50 feet deep
18 and there's about 20 feet of water above the actual top
19 of the spent fuel. So, there's another 20 feet of water
20 above that.

21 There's about five feet of concrete that's
22 on the outside of the lining itself. And so, that's
23 what's protecting the pool, the fuel itself, you know.

24 And so, from the sides and, you know, from
25 a leaking standpoint there's no - that's all there to

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1 prevent it from leaking and making sure that the water
2 stays inside the pool.

3 MR. CAMERON: I think maybe we can continue
4 this conversation offline, but thank you for that
5 question. And we're out of time. We're out of time.
6 And so, I'm going to ask Larry Camper to close the meeting
7 out for us and thank you all. Larry.

8 MR. CAMPER: Okay. Thank you, Chip. Let me
9 start by saying as I did at the outset of my comments,
10 thank you for coming and thank you for great questions,
11 good dialog. Very, very good thought went into your
12 questions and we appreciate that and we hope that we have
13 been able to answer them at least to a reasonable degree.

14 You know, burnup fuel, I heard burnup fuel
15 again and again. And I think what we need to do is - there
16 are two things.

17 I want to make sure that we go back and on
18 our website post the approvals that Blair was citing with
19 regards to the casks for the high burnup fuel.

20 And I also want to go back, Doug, and we'll
21 take a look at the actual authorizations that were used
22 to allow the burnup fuel to be at SONGS to begin with.
23 So, we'll work at putting a better explanation of that
24 particular activity on the website for your review.

25 I would also point out that the 60 years has

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1 come up a lot. We tried to provide a basis for that, but
2 also understand as I said, it may have just gotten lost
3 in passing.

4 Although the utilities have this 60 years
5 to decommission a nuclear power plant, none of them have
6 taken the 60 years. None of them have taken the full time
7 and a number of things drive that decision, not the least
8 of which is citizen concerns about it. That is a factor
9 that the utility considers as it goes about planning its
10 timeline.

11 Having the expert staff on site to do
12 certain things is a factor. Cost of waste disposal is
13 another. In fact, I think one of Bruce's slides got at
14 this. There's a number of parameters that go into the
15 decision that the utility makes as to how long it's going
16 to take to decommission that reactor.

17 Our process will remain a very transparent
18 process. Once we have that PSDAR, the Post Shutdown
19 Decommissioning Activities Report, it will be posted in
20 FRN. There will be an opportunity for comment. We will
21 have a meeting out here at that time. And we'll do what
22 we can, we'll strive to maintain as much transparency as
23 possible in this process.

24 And, Gene, with regards to your particular
25 request, as I said, we will take that into consideration

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1 near term and get back to the coalition on that.

2 So, what that, again I think that all of you
3 being here taking part, it's an important part of the
4 process and we appreciate you taking the time out of your
5 day to be with us and we certainly have enjoyed the
6 opportunity to be with you and will continue to
7 communicate along the way. Thank you.

8 (Whereupon, at 9:15 p.m. the meeting was
9 adjourned.)

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