

1 COMMUNITY ENGAGEMENT PANEL - REGULAR MEETING
2 DEFENSE IN DEPTH FOR DRY CASK STORAGE
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6
7 Moderated by David Victor
8 Thursday, August 22, 2019
9 5:35 p.m.

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12 Laguna Hills Community Center
13 Heritage Room
14 25555 Alicia Parkway
15 Laguna Hills, CA 92653
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23 Reported by: Lucas Mayeda

24 JOB No.: 3473934

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A P P E A R A N C E S

1
2 List of Attendees:

3 (Panel)

4 Jim Leach

5 Doug Woodyard

6 Rich Haydon

7 Marni Magda

8 Donna Boston

9 Paul Wyatt

10 Martha McNicholas

11 David Victor

12 Dan Stetson

13 Jerry Kern

14 Sam Jammal

15 Val Macedo

16 Doug Bauder

17 Lou Bosch

18 Jerry Stephenson

19 Garry Brown

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P R O C E E D I N G S

MR. VICTOR: -- us back to this terrific facility on August 22. Before we get started, a word on safety. Should there be a need to evacuate the building, you can leave the building through the exits that you came in there. There are also exits here, and you go out into the corridor and then out into the parking lot.

We have two members of the Orange County Sheriff's Department with us tonight for your safety. I want to thank them for joining us tonight and for their service.

For those of you watching us at home, or wherever you are but not here, if you'd like to send us a question that you'd like to have addressed tonight, please use the email address on the screen here. And if you are here in the audience and you don't want to ask a question in person tonight, but want to make it part of the official record, please also send your question to that email address within five days, and it'll be part of the official record and will get answered.

I want to put on the screen here the agenda. It's a big agenda. It's a lot going on. We're going to hear tonight principally about fuel

1 transfer operations, which have resumed. We're going
2 to learn what's happened for the first couple
3 canisters, where that process is headed, and then
4 we're going to hear about a topic that has been on
5 this panel's agenda since its formation, which is
6 defense in depth.

7 What are the layers of defense so that
8 we know that the spent fuel stored at the ISFSI until
9 we can move it out of here, what are those layers of
10 defense, and how do we know they're working? What
11 should we be expecting in the future?

12 We have guest speakers tonight, Lou
13 Bosch and Jerry Stephenson from SONGS and Doug Bauder,
14 chief nuclear officer. We'll introduce both of them
15 later in this meeting. We have a few opening
16 comments. The next slide, please. A few opening
17 comments regarding tonight's meeting and the
18 facilities.

19 As you came in, you saw Community and
20 SCE information booths that are available. They'll be
21 available during our break. I want to remind
22 everybody that the community engagement panel is an
23 engagement panel. It is not a decision making panel,
24 and it is designed, set up as an independent, two-way
25 conduit between the communities affected by

1 decommissioning and by Edison, which is operating the
2 site.

3 All the materials for tonight's
4 meeting, including the slide deck, have been shared
5 with the CEP in advance last week and then an update
6 today. All of that material has been posted to the
7 website. Copies of the agenda for tonight are on your
8 chairs.

9 I want to just call your attention to a
10 few -- there are a few items that are going to come up
11 tonight that are quite technical, including the
12 experience at the Koeberg Nuclear Plant in South
13 Africa with regard to its stress corrosion and
14 cracking. I was there a couple of months ago, and so
15 all of that material we've shared with the CEP and
16 with the public and it's on SONGScommunity.com.

17 So I'm going to be able to talk, and
18 others will be able to talk a little bit about some of
19 these topics tonight, but there's a lot more
20 information. I know this a topic of keen interest to
21 the communities. And it's really important that we
22 learn from what's happening at other sites and also
23 that we have learned accurately what has happened at
24 other places and what we should know about that.

25 If you want to -- if the CEP members

1 want to make comments or ask questions, please state
2 your name for those millions watching on live stream,
3 and tilt your name plate up here so that I can see
4 that you have a question, and I'll make sure that you
5 get the floor.

6 Members of the public, if you would
7 like to comment during the public comment period,
8 please fill out a card so we can get you in the queue.
9 And we'll get through as many comments and then some
10 as we can tonight.

11 Doug, I want to ask you if you have any
12 opening remarks that you'd like to make before we go
13 to the first major agenda item.

14 MR. BAUDER: Thank you, David. I'll be
15 brief. I'm here with a couple of key managers from
16 San Onofre. We thought it was important to get here
17 and have a discussion, as you mentioned, about the
18 first couple of fuel campaigns that were performed
19 after we restarted on July 15, and I want to
20 emphasize, you know, that these gentleman are here to
21 talk about improvements.

22 And so some of the material you'll hear
23 from Lou tonight will go into things we discovered
24 during those campaigns. Our goal is to be very open
25 and have this dialogue about exactly what is

1 happening, and so you will continue to get these
2 updates as we continue with the fuel campaigns.

3 And Jerry is here to also talk about
4 some engineering. It'll be a bit technical, but I
5 will tell you in advance, we're doing some things to
6 lead the industry, and Jerry is leading that effort at
7 the station. So more to follow, and thank you.

8 MR. VICTOR: Great. Thank you, very
9 much. First general update, I want to talk about some
10 changes to the CEP membership and our engagement with
11 Edison.

12 So as everyone knows, Steve Swartz
13 sadly passed away, and I want to thank the City
14 Council for appointing Mayor Pro Tem Dan Bane to the
15 CEP and welcome -- is Dan here? I don't think Dan
16 is -- Dan is not here today, and Kathy Ward has been
17 appointed as Dan's alternate.

18 Camp Pendleton, Tom Collin [ph] who was
19 on this panel for several years and was enormously
20 helpful to us, he has retired. I want to thank Tom
21 for his service, and also want to welcome Sam Jammal
22 to the panel, who is now the CEP member from Camp
23 Pendleton. And for tonight I also want to thank Doug
24 Woodyard who is sitting in for Orange County
25 supervisor, Lisa Bartlett. Doug is chief of staff.

1 Welcome, Doug, and thank you for joining us tonight.

2 And finally, I want to mention that Tom
3 Palmisano, who is still with SCE has taken on a
4 different role at SCE and so we thank him for all of
5 his service and for our interactions with Tom, and I
6 look forward to seeing him again in the future and at
7 a CEP meeting.

8 The next slide, please. So there's a
9 lot going on inside the industry and inside the
10 communities that are analyzing issues that are
11 important to us and also in the nuclear regulatory
12 commission.

13 I want to just mention a few things
14 that are on our radar, and then at the end of that
15 pause for others on the panel who might want to make
16 additional comments.

17 I gave a talk at an organization called
18 PATROM [ph]. This is an organization -- it turns out
19 to be a very large organization that specializes in
20 packaging and transportation of radioactive materials.
21 It's a huge community of people working on this
22 question, and I talked about our experience here and
23 also met a lot of people from that community. I think
24 they're going to be enormously helpful to us as we
25 start looking seriously at the options around getting

1 ready to move the spent fuel if that opportunity
2 arises. We'll talk more about that in just a moment.

3 In late June, I was in South Africa for
4 some other reasons and spent a day at the Koeberg
5 Nuclear Power Station. The experience at Koeberg has
6 been on our radar for a long time because they have
7 arguably the most serious challenges around stress
8 corrosion and cracking with a number of their pipes
9 and tanks. And I wanted to go meet them, open a line
10 of conversation between us and them so that we can
11 make sure we've learned everything that they're
12 learning about their tanks, and also that we can learn
13 accurately what's actually happened.

14 I wrote a summary report of this, and
15 we've circulated to the CEP in both my presentation
16 and their presentation to me to share with you about
17 what they've learned. There's a huge amount of
18 material in that. I want to just emphasize a few
19 things that are, I think, very important.

20 The tanks that have been of greatest
21 concern at Koeberg are tanks that change temperature
22 on a daily basis and are generally cold. And they
23 have a huge amount of condensation that accumulates on
24 the outside. So these are ideal conditions for the
25 accumulation of the precursors and then stress

1 corrosion cracking.

2 They have also seen the cracking
3 concerns in the parts of the tanks that are thin and
4 not the parts of the tanks that are thicker and more
5 consistent with the thickness of the stainless steel
6 canisters here. And they're using a very different
7 kind of stainless steel.

8 This was very, very important for us to
9 understand. This information is already inside the
10 industry, which has been learning a huge amount about
11 these dangers to stainless steel over longtime
12 horizons. And in some sense, Koeberg is an
13 interesting laboratory for that because it's a very
14 aggressive site.

15 When you look up, when you stand there
16 at the site looking out at the ocean, the ocean on a
17 good day is not nice, and on a bad day is just kicking
18 up salt and spray and so on. They've grappled a lot
19 with these issues. We can learn from them. I think
20 the industry is learning from them, and I'd welcome
21 further comments and questions as you look at the
22 materials that I've gathered from them.

23 One of the things I will call your
24 attention to is that there's been a variety of
25 misquotes and misanalysis of what they've learned,

1 which has been corrected in my view and my
2 understanding by a very important study that Electric
3 Power Research Institute, EPRI has done. And we have
4 circulated another copy of that study to the CEP and
5 made it available again to the public so that we can
6 all learn what the real rates of crack propagation
7 are, what the issues with temperature and thickness of
8 their stainless steel and the kind of stainless steel
9 that they're using.

10 I want to mention just two other
11 things, and I'm going to turn it over to Dan Stetson,
12 who's going to talk about radiation monitoring. We've
13 had an interesting, let's say, exchange of letters
14 with the senior management of Holtec earlier this
15 year. And be that as it may, we have to work on the
16 situation as it is. We have to call the shots as we
17 see them. We have to figure out how to make this site
18 the best site possible and make sure that the long-
19 term management of these canisters has integrity and
20 is done to absolute levels of excellence.

21 As part of that, we've asked some
22 questions about Holtec's governance, and we've asked
23 some questions about what they've learned from the
24 incident 13 months ago. And they, their CEO and
25 senior management and several members of their board

1 have invited us to go visit them.

2 And on the 17th of September, the CEP
3 leadership will spend a quality day in Camden, New
4 Jersey talking with Holtec's leadership, visiting
5 their facility and in particular focusing in on these
6 issues that are so important to us, which are the
7 quality of the corporate governance and oversight at
8 Holtec.

9 As soon as we have that visit, we will
10 share with the community our assessment and what we
11 learned from that, and we would welcome other comments
12 and questions that people have between now and then,
13 because I'm just in the process of putting together
14 the agenda for that meeting.

15 I also want to mention that a week from
16 tonight the NRC is coming back, and they're going to
17 the San Juan Capistrano Community Center and they're
18 going to have a meeting on the best practices around
19 what they call community advisory boards or what the
20 statute calls community advisory boards. And I know
21 several people will be there. I'm going to give a
22 talk on what I think we've learned and certainly
23 welcome lots of other inputs and a robust public
24 discussion about that.

25 I'm going to give the floor to Dan to

1 talk about radiation monitoring.

2 MR. STETSON: Thank you, David. As
3 many of you may recall, I was asked to testify at
4 Congressman Rouda's congressional hearing a couple
5 months ago. And during the hearing, Congressman Levin
6 asked me to report when the radiation monitoring would
7 begin by Southern California Edison.

8 As I didn't know the answer to that
9 question, I asked Southern California Edison and they
10 responded in a letter, which is drafted by Doug. It's
11 now part of the public record. And I wanted to
12 mention a couple pieces that are in that letter. So
13 I'll just cite directly from the letter itself.

14 "As you will recall, the concept of
15 realtime radiation monitoring was developed by SCE in
16 response to concerns expressed by members of the
17 public, thank you, very much, Jean Stone [ph], and
18 during the public California State Lands Environmental
19 Review of the Decommissioning Project.

20 SCE committed to install and maintain
21 an ISFSI gamma radiation monitoring system to supply a
22 realtime radiation data stream to local and state
23 agencies. The SONGS ISFSI realtime radiation
24 monitoring system will be placed in service prior to
25 the start of decommissioning activities, which is

1 forecast for the first quarter of 2020.

2 Once complete, the system will be
3 capable of streaming data to offsite agencies with
4 radiological expertise. SCE is currently contracting
5 with local and state agencies that will monitor the
6 realtime data feed from SCE and publish monthly data
7 reports, which will be accessible to the public via
8 the web.

9 This is a little bit more complicated
10 than first comes to mind when you read the letter. So
11 I'd like to ask Donna Boston from the County of Orange
12 to give us a little more enlightenment on this
13 subject.

14 MS. BOSTON: So with regard to the
15 radiological monitoring program that Edison intends to
16 create, local authorities, public safety agencies,
17 like the Orange County Sheriff's Department and the
18 Fire Authority and the local healthcare agency, our
19 purview is emergency response to a radiological
20 emergency at the plant.

21 We deploy our own radiological
22 monitoring teams. We collect our own data. We will
23 analyze it, and then we will make our decisions for
24 the community interest for your health and public
25 safety. That is our interest.

1 I think Edison is going to administer
2 this program in a different way than they had
3 envisioned originally. We do not have a legislated
4 mandate to be able to perform these activities. There
5 is no contract in place, and these are outside of our
6 capabilities.

7 We are an emergency response
8 organization in that respect, and our expectation of
9 Edison is that if and when they implement their
10 radiological monitoring program, and they have an
11 oversight for that capability with NRC, perhaps the
12 state might be involved, that any increase in readings
13 will be communicated immediately through our emergency
14 planning, through our emergency contact points, which
15 are 24/7.

16 Any increase in a reading would result
17 in our activation of our San Onofre Nuclear Emergency
18 Response Plan, which is specific to that nuclear plant
19 site. And we will deploy according to our plan,
20 according to the emergency responders that we have
21 trained, we have equipped, we have drilled, and we
22 have tested to be able to protect you.

23 That is our interest in this area. It
24 is really critical that we maintain that piece of what
25 is going on. And the radiological monitoring for --

1 to kind of address the community interest, that daily
2 piece, will sit somewhere other than in your local
3 emergency response organizations. So we think that
4 that's really important just to make sure that that
5 record is clear.

6 In addition to that, the community does
7 need to be aware of Senate Bill 465. So 465 has
8 passed both houses, and it is sitting in
9 appropriations right now and it's stalled. Edison has
10 opposed this bill. This bill is to take the place of
11 the current memorandum of understanding, which
12 provides funding for your emergency response
13 organizations.

14 So County of San Diego, the three
15 cities, Dana Point, San Juan, and San Clemente, the
16 County of Orange, that includes Orange County
17 Healthcare Agency, San Diego County Health Agency, all
18 of those emergency responders that I said that we
19 equip, train, plan, drill, all of that funding comes
20 from the current MOU.

21 Senate Bill 465 is to take the place of
22 that MOU and to create a framework and manageability
23 to the program that we think is important for clarity
24 and continual program management throughout the
25 dismantling of the site. And then hopefully when all

1 of the fuel is removed offsite, that funding would go
2 to zero.

3 But it is important to sustain
4 emergency response capability throughout the
5 dismantling, throughout the storage of that nuclear
6 waste. Your emergency responders need to have the
7 equipment and the protective equipment to protect
8 themselves and to be able to make the decisions for
9 community safety. Thank you.

10 MR. STETSON: Doug, could you please
11 give us SCE's perspective on this, please?

12 MR. BAUDER: Sure, I will. Thank you.
13 Thank you, Dan. Thank you, Donna, for the comments.
14 I appreciate it.

15 So I just want to be clear, Edison's
16 not opposed to the concept of the bill, Senate Bill
17 465. We're just taking a hard look at -- as it is
18 written right now, it would need some changes.

19 Just some basics to look at here, what
20 Edison supports is an emergency plan commensurate with
21 the risk. So when both units were operating at power
22 and we had four different emergency action levels, two
23 of those top levels, general and site area emergency
24 are not -- it's not possible to achieve those now.
25 And of the over 80 emergency schemes that we had at

1 power, there is roughly 16 or 18 of those schemes
2 left. And once the fuel is safely in dry storage,
3 there will only be four or five of those possible
4 schemes left.

5 So from Edison's perspective, the
6 emergency response is very important. We want to
7 continue the close relationships with the counties.
8 When Donna was talking about the reporting
9 requirements and the independent reporting of
10 radiological data, we will work that out some way or
11 another with the appropriate agencies.

12 I just want to emphasize, if there's a
13 realtime event, this is totally separate from that
14 reporting data. We will report it to the counties.
15 We will implement our proper response plans. And even
16 when the fuel is safely in dry storage, we will have a
17 24/7 command center on the site in the case of any
18 reporting needed to the counties or any response
19 needed. So we're very well aligned there.

20 Just getting back to the bill, we agree
21 in concept with the bill. We'd just like to see some
22 wording changes, and we'd like to see the bill more
23 appropriately scaled to the risks that we would
24 actually have both through decommissioning and more
25 importantly when the fuel is in dry storage.

1 MR. VICTOR: I think both of these
2 things we need to make sure get sorted out in a prompt
3 way. And my understanding is the radiation monitoring
4 system that has been discussed with the community,
5 that's responsive to community interests is going to
6 be ready and operational the first quarter next year.
7 And so we need to have some game plan for how the
8 community is going to know what's going on there.

9 And maybe even more urgently, we're
10 just getting to the end of the legislative session in
11 Sacramento right now and so maybe, Doug, you -- not
12 maybe -- it would be great if SCE could inform this
13 panel when we get to the end of the legislative
14 session, if we have a bill that's passed, great. If
15 we don't have a bill that's passed, what's the game
16 plan 'cause meanwhile the MOU is on the cusp of
17 expiration.

18 And I think we've got to have SCE and
19 the first responder community all joined up here
20 around us.

21 MR. BAUDER: Yeah. Thank you for that.
22 We will keep the community engagement panel informed.
23 I think we will achieve the agreements we need to with
24 a realtime radiation reporting. That is not really
25 tied to the bill at all as Donna indicated.

1 Just as a reminder, it's a matter of
2 public record that for the California State Lands
3 Commission Environmental Impact Report approval, we
4 agreed for the realtime radiation monitoring, and we
5 agreed, David, that it would start upon D and D, so
6 decommissioning and dismantlement of the plant.

7 And so we're working to improve that
8 timeframe, and we're looking for the right way to
9 produce the data so that it's independently reviewed
10 and their communities have a chance to look at it.

11 MR. VICTOR: Okay, thanks. Any other
12 comments about this? I want to talk briefly about
13 federal legislation, but before I do that, I want to
14 see if there are any other updates from members of the
15 panel about things that are going on in the community
16 that we should talk about.

17 Very briefly, next slide, please.
18 We've got to keep our eyes on the prize here. The
19 prize is getting the spent fuel out of here. It is
20 storing it safely and responsibly, highest level of
21 excellence, and then moving it responsibly to an
22 interim or permanent repository. We need to get the
23 fuel out of here. That's going to require a change in
24 federal law.

25 We talked about this a lot. I want to

1 just give everybody an update as to where I think we
2 are right now.

3 There are two main strategies. One is
4 to change the original Nuclear Waste Policy Act that
5 requires an act of Congress. In the House last
6 session, such an act was passed. As everyone knows
7 from Schoolhouse Rock, it's not just the House, it's
8 also the Senate and the president. Otherwise, it's
9 just a bill. There has been essentially no action on
10 the Senate side.

11 So we have now in the House
12 introduction of potentially new legislation, actually
13 several competing pieces of legislation, no hearings
14 yet. We expect that later in 2019. Without action in
15 the Senate, I see that what's going on in the House as
16 a way to create some markers to raise the probability
17 probably in the next session that we actually have a
18 change in the Nuclear Waste Policy Act.

19 Next year is going to be a bad year.
20 Our presidential election year is going to be a bad
21 year for trying to get complicated things done on
22 Capitol Hill, but maybe. Much more important is
23 appropriations.

24 In the House side, the House
25 appropriations language was worked on before the

1 budget bill that -- which was just recently adopted.
2 Doris Matsui along with support from Mike Levin, Scott
3 Peters, and many others have introduced funding in the
4 House Appropriations bill that would fund interim
5 storage projects, and that's what we need right now to
6 get interim storage going.

7 My expectation is that later this year
8 Chairman Lamar Alexander, who is quite passionate
9 about this topic, will introduce appropriations
10 language in the Senate. There's quite a lot of
11 support for this, but there's a lot of complexities in
12 the Senate.

13 Now that there is a budget bill, this
14 will proceed more slowly. My guess is September or
15 October, and that means we're in conference in October
16 and then maybe we see an appropriations action that is
17 aligned in the House and in the Senate by November
18 with a continuing resolution that funds the government
19 in between the end of the fiscal year, the end of the
20 year and sometime in November.

21 This is very, very important. And I
22 think if people are talking with their House members
23 and Senate members to continue to emphasize the need
24 for credible support for interim storage is vitally
25 important to us and also vitally important to these

1 efforts to change the standard contract or at least
2 send some signals so that spent fuel decommission
3 sites like San Onofre is put higher in the queue.

4 Myself, I don't think we should try to
5 go all the way and put ours number one, 'cause then
6 we're just going to create a lot of enemies. But
7 right now what we want to do is get our fuel as high
8 on that queue as possible so that when interim storage
9 becomes a possibility, we have a way of shipping it.

10 Any other comments or questions about
11 the federal scene?

12 [No audible response.]

13 MR. VICTOR: Next slide, please.

14 I want to give the floor now to Doug,
15 who will introduce the two major topics for tonight.
16 Doug Bauder.

17 MR. BAUDER: Thank you, David. So as I
18 indicated in the opening, it was our desire to come
19 here tonight and talk in real terms about the first
20 two fuel loading campaigns. And actually Lou will
21 talk a little bit about some lessons learned. We want
22 to be very open. It's our desire to continue to have
23 these discussions.

24 And I want to point out that we've
25 actually attached a lot of this information to our

1 website around some of those lessons learned and our
2 progress with the safe fuel offloading to dry storage.

3 Lou is a long-term employee at the
4 site. He's our plant manager. He's very focused on
5 safe fuel transfer, as is the rest of the team. We've
6 talked in depth in previous meetings about our
7 improvements. Well, on July 15, it was time to put
8 those improvements into action.

9 Even though we had NRC agreement that
10 we could safely restart fuel transfer on May 21, we
11 took some extra time to get everything right and put
12 everything in play as far as our improvements were
13 concerned for fuel transfer.

14 So Lou's going to talk about this.
15 He's going to give you some examples. He's going to
16 talk about worker engagement and building our safety
17 culture, which is very important. So, Lou?

18 MR. BOSCH: Okay. Can everybody hear
19 me? Okay. Thank you, Doug. So before I begin my
20 presentation, I wanted to give the CEP members and the
21 public a quick history of my nuclear background.

22 So I started in 1978 on my nuclear
23 career with the U.S. Navy as a reactor operator,
24 engineering watch supervisor onboard a fast-attack
25 nuclear submarine, the USS Hammerhead. I left the

1 Navy and went to work at Three Mile Island unit one in
2 1984 as an instrument control technician.

3 I left the Navy -- excused me. Then I
4 learned about this beautiful place out here in
5 Southern California called San Onofre. I came to work
6 for Southern California Edison in 1986 as an
7 instrument control technician. I finished my degree
8 and went to work in engineering in 1996.

9 I was then asked to get my senior
10 reactor operator's license and entered the licensed
11 operator training program. I obtained my senior
12 reactor operator's license in 2006, qualified as a
13 shift manager, and while on shift managed full power
14 operations for both unit two and unit three.

15 The decision was then made to enter
16 decommissioning. I went back to engineering as the
17 engineering manager for decommissioning, transferred
18 to the quality assurance manager, then in 2014 I was
19 promoted to the plant manager.

20 So my career at Southern California
21 Edison has been for 33 years. And throughout that
22 time safety has been and always will be my personal
23 top priority. And when I say safety, I'm referring to
24 nuclear, industrial, and radiological safety.

25 I also want to point out that I'm a 33-

1 year local resident of the community. I lived in Dana
2 Point, San Juan Capistrano, and currently live in
3 Oceanside. I'm blessed with a terrific wife, two
4 great children, and four very energetic grandchildren.

5 So I'm constantly educating my family,
6 friends, and neighbors on what we do at San Onofre and
7 why it is safe. So my personal commitment to the CEP
8 members and the public is that the SONGS team will
9 safely and compliantly transfer used nuclear fuel from
10 the pool to the pad.

11 Okay. So we're going to go through
12 some decommissioning principles. You all have seen
13 these before. I've already talked about safety. When
14 it comes to stewardship, this is so to make sure that
15 we spend our trust fund prudently. So we have one of
16 the largest trust funds in the nation, and it's fully
17 funded. We still have to go to the California Public
18 Utilities Commission and explain to them every dollar
19 that we spent is prudent.

20 At engagement, we engaged the public in
21 many different ways. Right now, at the community
22 engagement panel we give plant tours, and thousands of
23 people a year visit us at San Onofre where we're
24 constantly educating people on what we do and why it
25 is safe.

1 Okay. Fuel transfer operation status
2 and forecast. So after completing all of our
3 corrective actions from the August 3 MPC misalignment,
4 and the NRC had no safety concerns, Southern
5 California Edison restarted fuel transfer operations
6 on July 15 as Doug stated.

7 So MPC30, this was the canister that
8 was stored in the unit three fuel handling building,
9 seismically secured in the high track for the past 11
10 months, and was transferred to the ISFSI on July 18.
11 The next canister, MPC31, was a new one that we loaded
12 with 37 fuel assemblies, welded the canister, dried,
13 and we transferred that canister to the ISFSI on July
14 30.

15 Then, we have an assessment and
16 modification break for two weeks. During this break,
17 we went in and we modified the unit three cask crane
18 and we performed an assignment of what went well and
19 what things that we can learn, and I'm going to talk
20 about that.

21 So MPC32 is placed into the unit two
22 cask loading area presently, and we are now in the
23 process of welding it tonight. And it will be ready
24 to download onto the ISFSI on August 29. And then
25 MPC33 will be from unit three, and it's forecast to be

1 downloaded on September 6. And then complete fuel
2 transfer is going to be completed in mid-2020.

3 Okay. So let me tell you what went
4 well during the transfer of canisters 30 and 31 from
5 the pool to the ISFSI. I will then go through some
6 lessons learned.

7 So a good focus on safety and coaching.
8 Every meeting at San Onofre starts with a safety
9 moment. Workers are receptive to coaching, and the
10 coaching could be as simple as an individual walking
11 out in the plant and forgetting to put their safety
12 glasses on, and we coach them, and that's the
13 expectation is that they are receptive.

14 Furthermore, every time a worker writes
15 a safety action request, this is an entry into our
16 corrective action process, the worker gets a followup
17 with our safety specialist to ensure that we address
18 the employee's concerns.

19 So the next bullet, effective pre-job
20 briefs and turnovers. So what is a pre-job brief?
21 It's a meeting with the workers before performing a
22 job to discuss tasks, involved hazards and related
23 safety precautions. The whole tech team performed
24 thorough pre-job briefs every morning and then they
25 performed a follow-up two-minute brief in the field

1 prior to performing their task.

2 The next bullet, low threshold use of
3 the correction action program. This is the key to the
4 success of our fuel transfer operations. Workers have
5 a low threshold for writing action requests and
6 getting problems into our corrective action problem.

7 For example, I'll give you an example.
8 There was some static on a headset while they were
9 doing a download. A worker raised his hand, he talked
10 about the static, we wrote an AR, we put it in the
11 corrective action process, and we fixed it.

12 So early identifications and prompt
13 resolutions. I will tell you, as Doug talked about,
14 this is a project, and we will have issues. And the
15 early identification ensures we find and fix our
16 problems early. And furthermore, with the early
17 identification of problems we can address them if
18 there's any type of negative trends.

19 Schedule pressure is not an issue at
20 San Onofre. Workers understand the station's priority
21 of safety and compliance and will stop work when there
22 is uncertainty. Schedule pressure is not an issue.

23 Open communication and interactive
24 participation. So the daily communication with our
25 workers done at the pre-job briefs in the morning to

1 ensure we are getting the message, we also ask our
2 workers the question to validate that they understand
3 exactly what's going on in the comprehensive and
4 widespread feedback, daily feedback on what went well
5 and what improvements could be made.

6 So I'm going to talk about some lessons
7 learned. I will start off by saying all of these
8 lessons learned are considered low level.

9 The bolt-thread issue. So this is
10 while attaching the lift cleat bolts on top of the
11 MPC, the individual came into where he had some
12 problems. He came up with some resistance. We found
13 that the leading threads were galled after the crew
14 was not able to turn that end. The workers stopped,
15 entered the issue into our corrective action process,
16 got engineering involved, and we corrected the
17 problem. The lift cleat bolts are now stored with
18 protective covers.

19 The next one, procedural
20 misunderstanding on the mating device door. So after
21 downloading an MPC into the storage vault, the mating
22 device needs to be closed for a period of time to
23 remove the high track and install the U-max lid. The
24 mating device was conservatively only allowed to be
25 closed for four hours. During the evolution, a worker

1 got part of his body under a suspended load. No one
2 was hurt, but Holtec recognized this area and went to
3 a safety stand down. The drawer was closed for four
4 and a half hours.

5 Holtec had a lot of margin in their
6 calculations and determined the drawer could be closed
7 for up to nine hours. Holtec clarified the procedure
8 to eliminate the confusion about the drawer closure
9 times. They also conducted training and briefings
10 with the crews to communicate these requirements.

11 The last issue is addressing the MPC
12 rain water intrusion. So if you drive down I-5 and
13 look towards San Onofre, you will notice the large
14 cylinders covered with blue tarp on them. These
15 cylinders are where Holtec stores the MPCs prior to
16 placing them into the spent fuel pool and load them
17 with fuel.

18 When a worker was performing a
19 scheduled preinspection of the unloaded canister, the
20 worker understood they got rain intrusion. So he
21 discovered standing rain water in multiple MPCs.
22 Worker wrote an AR, got the issue into our corrective
23 action program, and SCE and Holtec worked together and
24 developed a rinsing plan for the spare MPCs that
25 have -- and we have cleaned two of them to date. All

1 remaining spare MPCs will be rinsed prior to
2 instillation into the spent fuel pools.

3 Okay. So a status summary. There are
4 no serious safety or human performance issues. Safety
5 continues to perform well, and Holtec -- just for an
6 example, Holtec, our contractor, had not had a serious
7 injury since December 2, 2017.

8 I want to talk about teamwork. We held
9 offsite meetings with Holtec management to enhance our
10 teamwork, and we developed ten rules of engagement.
11 So we are the licensee. Holtec is our contractor, but
12 we've come up with these rules of engagement 'cause we
13 were -- we are going to have disagreements.

14 So the first one is encourage open
15 communication. Work through disagreement in a
16 positive motion. Be a good listener. Listen to what
17 people are telling you to make sure they understand
18 what the problem is. And one of my personal favorites
19 is leave your ego at the door.

20 The healthy and effective relationship
21 between Holtec and SCE. We, Southern California
22 Edison are the licensee. Holtec is our contractor,
23 and we have a healthy and effective relationship. We
24 have two meetings a week with senior Holtec management
25 to discuss and status any open pending issues that are

1 boiling up. And continuous improvement actions are in
2 progress.

3 Procedure revisions to improve clarity.
4 Workers continue to write procedure enhancements, ARs
5 to improve our process. So that's a healthy way to
6 change our procedures to make sure that we are getting
7 the best in equipment upgrades. Examples are load
8 shackles, monitoring devices, and cameras.

9 So in summary, safety and compliance
10 are the SONGS team top priorities, followed by workers
11 having a low threshold for self-identifying issues and
12 placing them in the SCE corrective action program to
13 get fixed.

14 MR. VICTOR: Thank you. I want to see
15 if there are questions or comments people want to
16 make. Dan Stetson?

17 MR. STETSON: Thank you, Lou. Since
18 the resumption of transfer of fuel, have any of the
19 canisters become caught on that lip, similar to the
20 one where we had the incident in August?

21 MR. BOSCH: So the first two canisters,
22 well the two canisters that we downloaded, we
23 haven't -- we never received -- let me just back up a
24 little bit so just to make sure everybody's
25 understanding it.

1 We have underload alarms that will tell
2 you if the canister gets hung up. We did not have any
3 underload alarms during the last two downloads.

4 MR. VICTOR: Marni Magda.

5 MS. MAGDA: You mentioned that there
6 was an accident. It was an injury accident with
7 Holtec in 2017, as you were going through, and I just
8 wondered what was that accident and what were the
9 lessons learned, and how do they apply to us?

10 MR. BOSCH: Okay. Good question. That
11 was an individual walking out of the spent fuel
12 building, tripped and fell and broke their arm.

13 MS. MAGDA: Thank you.

14 MR. BOSCH: Okay.

15 MR. VICTOR: I just quickly -- I'm
16 mindful of time, but I just have three questions.
17 First one, how do we -- how is Holtec moving lessons
18 around inside the company. They're doing all this
19 with you. This is more than they're doing in any
20 other site, and they should be doing that, but they're
21 working at other sites. And so the first question is
22 how do we -- how is that working? 'Cause in the rest
23 of the nuclear industry that's standard, and that was
24 not happening previously.

25 Second question is, when we go to

1 Holtec on the 17th of September, what questions should
2 we be asking their CEO and senior management about
3 this process. And the third question is, can you tell
4 us a little bit about how this process compares with
5 what was going on before? Is this just completely
6 different and it takes three times the length that it
7 previously took? Is it kind of 20 percent different,
8 and the time required is about the same? Just give us
9 a sense of the similarities and differences.

10 MR. BOSCH: Okay. So let me start with
11 Holtec has a database for all these lessons learned.
12 So we can -- we have access to that database. This is
13 throughout the Holtec fleet, and so whatever time
14 there's an issue that comes up, they feed it into
15 their database. And we, Edison, our oversight
16 specialists, go into that database to try to find out
17 if there's anything that we could learn from that.

18 MR. VICTOR: And was that there before
19 or not?

20 MR. BOSCH: That was there before. I
21 don't think it was kept up to date as properly as they
22 should.

23 MR. VICTOR: Okay. So maybe one of the
24 questions we should be asking them is, what is the
25 realtime status of that, and what we'll be learning.

1 MR. BAUDER: That's a good question.
2 And the second question was again?

3 MR. VICTOR: That was the second
4 question.

5 MR. BOSCH: Okay.

6 MR. VICTOR: The third question is how
7 different is this from what was going on before in
8 terms of speed of operations and also the overall
9 procedural integrity.

10 MR. BOSCH: Okay. So I will tell you
11 that -- we're talking about what actually has improved
12 because of the procedures, the oversight, the -- going
13 through, give you an example, we had some issues when
14 we were doing some downloads before. The -- now we're
15 loading fuel. We went and loaded fuel yesterday on
16 the one MPC. We had no issues. And actually out in
17 the field when we're doing the download, it's about
18 the same amount of time, you know, that it takes to go
19 through the download, but we have actually
20 checkpoints.

21 Where we had the hangup before, what we
22 would do is we would lower the MPC down to just before
23 the hangup happened. We would stop. We would
24 validate everything is correct, and then we'd do the
25 download. So we went -- it only takes about 20

1 minutes once you start the download to go to the
2 bottom. So we stop, we pause, make sure everything is
3 right, and it goes all the way down to the bottom with
4 no issues. As opposed to before, when they had a
5 hangup and they had to rebalance and recenter the MPC.

6 So I will tell you that the timing,
7 because of the changes that we made, because of the
8 oversight that we're doing, I actually -- we are more
9 efficient.

10 MR. VICTOR: Okay. So you're on 32,
11 and remind me what's the max. What's our goal?

12 MR. BOSCH: Excuse me?

13 MR. VICTOR: You're on number 32 right
14 now.

15 MR. BOSCH: Right.

16 MR. VICTOR: Where's the red -- the
17 checkered flag, what canister number?

18 MR. BOSCH: I'm not following you. Oh,
19 73, okay.

20 MR. VICTOR: 73.

21 MR. BOSCH: Yeah.

22 MR. VICTOR: Last question. Then I'll
23 let you go on. Where are we with the scratching
24 issue? Is there a reason to think that the concerns
25 about the scratching are materially different now than

1 they were 13 months ago? I assume the kind of
2 incidental bumping is going to be about the same,
3 which means that whatever you've learned from the HD
4 camera inspections of those sample of canisters,
5 should we expect that on these there should be less
6 scratching, more scratching?

7 MR. BOSCH: Well, I would tell you,
8 just from what we -- we're not seeing any underload
9 alarms, which means it's not coming up and bumping
10 against. You're still going to have incident bumping
11 or rubs, but I would say that it would be less, just
12 because that we're not going up against the -- or
13 having those underload alarms.

14 MR. VICTOR: Okay. Thank you, very
15 much. Did you want to add anything, Doug?

16 MR. BAUDER: Lou, I think that's
17 accurate regarding scratching. And to David's
18 question, we know that there will be incidental
19 contact during downloading and potentially later on
20 during uploading. And the seismic restraints inside
21 the cavity enclosure are very close for a reason.
22 They're seismic restraints, and that's how the design
23 works.

24 So I would say we learned a lot through
25 the robotic camera inspections. I think Jerry will

1 talk about that in his segment as well.

2 MR. VICTOR: Great. Why don't we give
3 the floor to you, Doug, to give us an update on the
4 decommissioning process?

5 MR. BAUDER: Thank you. I just wanted
6 to cover maybe the second question you had first,
7 David, which is what kind of questions we should ask
8 Holtec senior management. I think that's one of them,
9 lessons learned in their database and how they're
10 applying that across the industry.

11 I also think we'll talk about
12 governance. We'll talk about, you know, what level of
13 governance they have. And I'll tell you candidly
14 that, you know, Holtec has agreed that the training
15 processes we put in place at San Onofre are very good.
16 And so they're implementing those training processes
17 elsewhere.

18 So I think that's a good topic for
19 discussion when we do meet with Holtec.

20 MR. VICTOR: Great. Maybe they should
21 also sleep on an angry letter before mailing it. That
22 would be a good idea as well.

23 MR. BAUDER: Right, right. So I just
24 want to provide some general updates around
25 decommissioning and where we are. Moving ahead, I'll

1 talk about the decommissioning plan. This is just a
2 layout of the schedule.

3 I'll talk a little bit about seismic
4 safety, because we did get some questions following
5 the July 5 Ridgecrest minor earthquake, and then
6 environmental permitting and our overall strategic
7 plan.

8 So here's a layout of the schedule, and
9 I know you've seen this before. I want to emphasize
10 when, you know, the focus right now is on safely
11 transferring the fuel to dry storage. We anticipate
12 that will complete possibly late spring of next year,
13 but we are in no way focused on schedule and placing
14 that as a priority over everything else.

15 To David's question around efficiency
16 and how that works, I'll tell you that as Lou
17 mentioned, entering things in the corrective action
18 program and incrementally improving, actually in the
19 end improves schedule. So you improve your safety,
20 you improve your compliance, and in the end you get a
21 schedule improvement.

22 So when you look at this layout, just a
23 couple more talking points, when you see the sequel
24 [ph] review, we've been through the State Lands
25 meeting. That approval occurred on March 21. We're

1 looking for the coastal meeting, Coastal Commission
2 meeting next month on September 12.

3 And then my personal desire, when you
4 see fuel transfer offsite is to move that bar to the
5 left. And so we'll talk a little bit more about that
6 as we progress here with respect to bringing on some
7 strategic consultants to help us with that and to help
8 us be ready.

9 MR. VICTOR: Martha?

10 MR. BAUDER: Question.

11 MS. MCNICHOLAS: The question on your
12 chart, can you go back a slide?

13 MR. BAUDER: Sure. Let me figure this
14 out.

15 MS. MCNICHOLAS: Okay. I thought you
16 said all canisters would be transferred late next
17 year, but your bar in the middle says all fuel in dry
18 storage going out to 2050.

19 MR. BAUDER: Right. It could just be
20 the way the graphic is laid out. We intend to have
21 the fuel transferred to dry storage by late spring of
22 next year. That schedule could be influx, depending
23 on as we move through the process, focusing on safety.

24 You can see the dotted line coming down
25 from 2020 and then all fuel and dry storage. Is that

1 where the question is?

2 MS. MCNICHOLAS: Okay. So I see,
3 that's where -- it's staying there until we can move
4 it offsite. That's not transferring --

5 MR. BAUDER: Correct.

6 MS. MCNICHOLAS: -- that's just
7 staying. Okay.

8 MR. BAUDER: That's staying in dry
9 storage until it's --

10 MS. MCNICHOLAS: Okay.

11 MR. BAUDER: -- until we have a
12 repository and until we're fully ready to do that as
13 well.

14 MS. MCNICHOLAS: Okay.

15 MR. BAUDER: And obviously, as David
16 indicated before, we want to be fully ready when a
17 repository is available.

18 MS. MCNICHOLAS: Right.

19 MR. BAUDER: That's the goal.

20 MS. MCNICHOLAS: Okay. I understand
21 that. So that's not a transfer, that is a staying.

22 MR. BAUDER: Right.

23 MS. MCNICHOLAS: That long blue bar.

24 MR. BAUDER: Right.

25 MS. MCNICHOLAS: And we want to move it

1 to the left.

2 MR. BAUDER: We want to move the green
3 bar to the left. And I want to point out that we --
4 as we stick to our plan here, about 80 percent of our
5 fuel will be ready for transfer by the end of next
6 year, legally ready, fully prepared for transfer. So
7 we'll be in that place where we're desiring that
8 transfer to happen, we're just waiting on a repository
9 and a plan.

10 MS. MCNICHOLAS: Thank you.

11 MR. VICTOR: Doug, are you going to
12 talk about North Wind at some point in this --

13 MR. BAUDER: I am.

14 MR. VICTOR: Okay.

15 MR. BAUDER: I am. So we got some
16 questions, appropriate questions after the July 5
17 Ridgecrest earthquake, and I thought a couple of
18 slides on this would be important.

19 The quake was 0.57g. We talk about g's
20 in ground acceleration in nuclear, but that was near
21 the epicenter, and a very low-magnitude quake at
22 SONGS, 0.015g. It was felt by the operators. The
23 operators implemented our earthquake response plan,
24 which included reports to Lou and detailed walkdowns
25 of plant equipment, including the dry fuel storage

1 area, and there was no issues there.

2 We have looked at earthquakes in quite
3 a bit of detail at the station. Our largest potential
4 interaction, as we, I think, discussed in this meeting
5 before is a Newport-Inglewood-Rose Canyon fault
6 system, which is out in the ocean. It's about five
7 miles out in the ocean away -- west of the plant. And
8 the plant is designed to withstand about two-thirds of
9 a g continuous ground acceleration, which is quite
10 high.

11 Also the dry fuel storage system is
12 designed to withstand 1.5 peak ground acceleration.
13 That's in the horizontal direction, 1 g of peak ground
14 acceleration in the vertical direction. So about
15 double that of the plant equipment. So the fuel
16 itself and the dry fuel storage system is much more
17 seismically robust than even the plant systems.

18 We do have a reference to this on our
19 SONGScommunity.com website under seismic safety. You
20 can see the link there if you choose to look into that
21 in some more detail.

22 We have done, as I indicated, quite a
23 bit of research in the seismic area. We commissioned
24 a study in 2017. We were interested in that Rosewood
25 fault structure and specifically interested in what

1 kind of a fault would occur if there were to be an
2 earthquake from that structure.

3 We were concerned with a blind thrust
4 fault. Turned out, in studying the science around it,
5 that was not supported. Strike-slip is supported,
6 which matches our plant seismic design basis and our
7 criteria. So we would anticipate a 7.3 or 7.4
8 magnitude quake less than 7.5 in the latest seismic
9 hazard analysis, but I also bring you back to the fact
10 that we look at ground acceleration, which is the real
11 meaningful data around what could happen if there was
12 an earthquake at the station.

13 MR. VICTOR: And can you just connect
14 the dots for everybody? The view is supported by
15 serious analysis that at maximum magnitude for the
16 Newport-Inglewood-Rose Canyon fault, which would be
17 7.4, that the peak ground acceleration at the plant
18 would be less than 0.67g.

19 MR. BAUDER: That's exactly right.

20 MR. VICTOR: Okay. Any other comments
21 or questions?

22 [No audible response.]

23 MR. BAUDER: Okay. Just a very brief
24 couple of statements on permitting. You could see it
25 on the earlier slide, which showed the schedule. We

1 have worked through the environmental impact report.
2 We have an FEIR, a final report, which is approved by
3 California State Lands on March 21, and then we're
4 working toward a coastal development permit, which is
5 on the agenda for the September the 12th meeting.

6 We anticipate being fully ready for
7 that meeting. It's our desire to carry forward an
8 effective and a safe and environmentally compliant
9 dismantlement and decontamination of the plant, and
10 that is the end goal here for us and also along the
11 way being good stewards of our trust fund and good
12 stewards of the environment.

13 David, I indicated I would introduce
14 North Wind's team. We have four members here. Phil,
15 Elizabeth, Brian, and Mary, are you sitting out there
16 where I can see you? Oh, there you are. So, yeah,
17 just -- there's Phil and Elizabeth anyway. Two
18 others, so you split up in the crowd. That's good.
19 Okay. So the team is here with us. We anticipate at
20 the next meeting, November 21, the North Wind team in
21 conjunction with the expert's team led by Tom Isaacs
22 will report out at this panel, David. So we
23 anticipate that will be the case.

24 I want to emphasize maybe just a couple
25 things around what the team does. And I want to

1 emphasize the detailed work that is required here,
2 because sometimes it's not immediately apparent.

3 We brought this team on to help us with
4 a strategic plan to move the fuel to either an
5 approved federal final repository or a consolidated
6 interim storage system. And it's not just as simple
7 as a system is available and licensed so we'll just
8 move the fuel. There's detailed transportation
9 planning required. There's a lot of work to do there.
10 The team will be talking to local folks and federal
11 folks about those options. The team is technically
12 savvy.

13 And my challenge is, or my question is,
14 how would it look if a repository was available and
15 licensed and we weren't ready. So the team is doing
16 everything they can to have a plan that's ready to go
17 so when a repository is available, we're doing
18 everything we can to be first in queue to ship the
19 fuel. That may sound selfish, but we do want to be
20 first in queue. We do want to be ready.

21 We want to have the transportation
22 compacts worked out. We want to have everything
23 worked out with local jurisdictions, with the
24 counties. All of that takes detailed work, and we
25 brought the team on to do some of that work. So

1 you'll learn more about that in the November meeting.

2 MR. VICTOR: Dan, did you want to
3 comment on this?

4 MR. STETSON: Thank you, Doug. What's
5 the difference between what they're doing and the
6 expert team in terms of roles and responsibilities?

7 MR. BAUDER: So actually the strategic
8 team, North Wind is actually working with the expert
9 team at some levels, but the strategic team is doing a
10 lot of boots on the ground work to help out with the
11 experts team and, you know, the end goal, the
12 statement of work is to have a plan on the shelf.
13 Hopefully it doesn't stay on the shelf very long.
14 Hopefully we can use it to effectively ship our fuel.

15 MR. VICTOR: We met with the team
16 earlier today to find out places where the CEP, which
17 as everyone knows spent a lot of times on these
18 issues, as have many other members of the community,
19 and so I look forward to that engagement. We're also
20 in regular contact with Tom Isaacs and really look
21 forward to hearing from these teams as their work
22 unfolds, 'cause I mean excellence in plant operations
23 is first and foremost. But we need to also keep our
24 eyes on how to get the fuel out of here in a
25 responsible way. Any other comments?

1 [No audible response.]

2 MR. VICTOR: Okay. Let's move on.

3 MR. BAUDER: Appreciate that. We're
4 going to move forward now. I'd like to just T off
5 Jerry's presentation to the panel.

6 At the front of the meeting I indicated
7 that Jerry was going to talk about our Holtec system,
8 but also just as importantly talk about some leading
9 edge things we're doing at San Onofre to lead the
10 industry.

11 And we talked about the robotic camera
12 inspections before. We're looking at other technology
13 to further lead the industry, and this is really
14 important for SONGS. We think it's important for the
15 whole industry, but we are leading.

16 And also I just want to -- I think,
17 David, just as a reminder, this was a followup from an
18 earlier meeting where since we have new panel members,
19 a little bit of presentation on the material regarding
20 dry storage itself. Is that right?

21 MR. VICTOR: Yeah, I think it's both --
22 this type of topic is just vitally important.

23 MR. BAUDER: Yeah.

24 MR. VICTOR: And it keeps changing
25 because the technologies improve as people -- as the

1 whole industry focuses on the need for aging
2 management, and we learn from other canisters that are
3 older and plants that are going through re-licensing
4 and so on.

5 So the idea is that every year or so
6 the panel here has an update on where the industry is
7 and where you are on defense-in-depth for the ISFSI.
8 So I'm really appreciative that you're doing this.

9 MR. BAUDER: Right. So Jerry leads our
10 engineering team. Jerry, go ahead.

11 MR. STEPHENSON: Okay, thanks, Doug.
12 So a little about me, I've been an engineer at San
13 Onofre for 37 years. I moved here from Illinois right
14 out of grad school, raised my family here. My
15 youngest is still in the house. She's a 15-year-old
16 cheerleader in Carlsbad. My oldest is a college
17 golfer at Fresno State.

18 I'm currently the manager of ISFSI
19 engineering. My staff and I are responsible for all
20 the technical decisions and technical issues
21 associated with dry storage at San Onofre. We're
22 active in the industry groups, industry user groups,
23 industry working groups, and we have the strongest dry
24 storage engineering staff in the country.

25 Tonight I'm going to talk about

1 defense-in-depth.

2 MR. VICTOR: Can you pull your
3 microphone a little bit closer?

4 MR. STEPHENSON: Okay. I'll try.

5 MR. VICTOR: I don't think everybody
6 can hear you.

7 MR. STEPHENSON: Okay. Tonight I'm
8 going to talk about defense-in-depth, specifically
9 design, fabrication, inspection, and remediation.
10 We're not going to talk about the middle bullet
11 operations, maintenance, and security. So you hear
12 about aging management a lot. Inspection and
13 remediation are two of the key bullet points in aging
14 management.

15 So starting with design, we insisted on
16 choosing a design that was qualified for both on-site
17 and offsite storage. We weren't going to repackage
18 the fuel before we shipped it. While the DOE is
19 legally bound to take fuel from all -- take all fuel,
20 interim storage facilities are not. There is no plan
21 to accept any bolted lid casks or thick casks at any
22 of the planned interim storage facilities.

23 We insist that our chosen design be
24 currently licensed for transportation. It would be
25 nonconservative to choose a design that hadn't yet

1 been licensed. We're a conservative company. We make
2 conservative decisions. That's how you like us to be,
3 and we weren't going to choose a design based on a
4 promise that it might be licensed someday.

5 Obviously, the design had to meet our
6 seismic criteria. The seismic criteria for the ISFSI
7 pad is about two times as robust as the rest of the
8 plant. Okay. The canister had to be long enough to
9 accommodate our fuel. Many of the casks on the market
10 were not long enough to accommodate our fuel.

11 Low dose rates were and are important
12 to us to provide maximum worker safety. The two
13 designs that we chose have the lowest dose rate
14 available, much lower than the above-ground canister,
15 vertical canisters that are used extensively in the
16 industry, and much, much lower than the thick-walled
17 casks.

18 Three vendors met all of the criteria
19 that we reviewed, Areva, Holtec, and NAC. All were
20 very qualified, and the decisions were based on second
21 order considerations that we reviewed carefully to get
22 us the best ISFSI installation possible. We chose
23 Orano and Holtec, the two industry leaders in the
24 United States.

25 Now, I just want to point out that

1 Orano is the new name for Areva. So if you're used to
2 see Areva, they've changed their name to Orano.
3 There's also TN, Transnuclear, NUHOMS, they all mean
4 the same thing.

5 MR. VICTOR: Before you move on, just
6 back up to the previous slide. There. It'd be great
7 if they'd stop changing their name. I guess I wanted
8 to make a comment and ask a question.

9 The comment is that when I was Koeberg,
10 it happened the same day that I was there that a
11 Holtec canister arrived and was being moved through
12 the security fences into the spent fuel pool so that
13 during the next outage they could load it. And I got
14 talking to the plant managers as to why they chose
15 Holtec, and they said that they had, I believe, four
16 very thick-walled canisters from a German vendor that
17 they were perfectly happy with, and when they went out
18 to buy more, the vendor couldn't qualify.

19 And so their qualification process,
20 which required the same kinds of criteria that you're
21 talking about, they ended up focusing on a limited
22 number of firms, and Holtec was the winner in that
23 process. They were using a different design. They
24 don't have the seismic requirements that you have.
25 They're not doing the underground system, and it's a

1 steel overpack as opposed to the underground concrete
2 system.

3 So two questions for you. The first
4 one is, is that what you're seeing globally in the
5 industry, which is that these vendors, people might be
6 enthusiastic about it, but are not actually able to
7 qualify, and what we're observing with these three
8 vendors is what we're observing globally?

9 MR. STEPHENSON: So I can't comment
10 specifically about every vendor out there, but -- and
11 there are some portions of the license that not all
12 vendors have. For example, transportation. So I
13 don't know what they didn't have in South Africa and
14 what they did and didn't have, but there are some
15 challenges. And I'll talk more about the thick-walled
16 canisters on my next slide.

17 MR. VICTOR: And second question, maybe
18 this is to Doug. I know in the discussions with
19 Congressman Levin's taskforce, these same issues of
20 selection criteria and the application of the
21 selection criteria have come up, and it's my
22 understanding, actually, from Congressman Levin that
23 you are preparing a report for his taskforce about
24 these same issues that are being raised. Where are we
25 in that process? Is the report under review, or kind

1 of what -- when can we expect to see that?

2 MR. STEPHENSON: So we did meet with
3 Congressman Levin's taskforce, a subgroup of the
4 taskforce at the station in late May, and we talked
5 about a number of topics around the canister system,
6 around storage in general and the design, and we
7 agreed in that meeting to do a refresh analysis on
8 going back to the decision criteria and updates since
9 then.

10 We also decided to look into various
11 challenges that we received in that subtask group
12 meeting about the canister design. So we worked
13 through that. The refresh paper is almost done.
14 We're actually working through the internal review
15 process. We're making some adjustments, and then we
16 intend to share it, probably mid-September timeframe.

17 MR. VICTOR: Okay. Martha McNicholas?

18 MS. MCNICHOLAS: Jerry, could you
19 repeat -- I think I heard you say federal storage,
20 they have to accept anything, whatever container we
21 have.

22 MR. STEPHENSON: Well, I don't know --
23 they have to accept all fuel.

24 MS. MCNICHOLAS: Oh, they have to
25 accept all fuel.

1 MR. STEPHENSON: Okay.

2 MS. MCNICHOLAS: But the interim
3 storage sites --

4 MR. STEPHENSON: So the interim
5 storage -- I'm sorry.

6 MS. MCNICHOLAS: Can you say what
7 you --

8 MR. STEPHENSON: The interim storage
9 facilities are being built to accept canisters, not
10 thick-walled, bolted-lid casks.

11 MS. MCNICHOLAS: Okay. They're
12 canisters, not thick-walled, bolted-lid casks.

13 MR. STEPHENSON: Right. So the
14 canisters like are used at San Onofre and, you know,
15 90 percent of the utilities in the country that are
16 shipped in a transfer cask and then the canister comes
17 out of the cask and goes into the interim storage
18 facility.

19 MS. MCNICHOLAS: Okay, got it. Thank
20 you.

21 MR. STEPHENSON: Okay. So there's been
22 a lot of comments in a lot of public meetings about
23 thick-walled casks. The first two lines of this chart
24 are the CASTOR casks that are being discussed as
25 possibly superior to the canister design that is used

1 at San Onofre and throughout the United States. This
2 chart was put together to show all of the bolted lid
3 or thick-walled casks that are available worldwide.

4 So first look at the next to the last
5 column, right there. Notice that there are none of
6 them that have -- that are long enough to accept our
7 fuel. So that made it very difficult to choose one.

8 Okay. Second, look at the column
9 beside it, licensed for transport. Like I said
10 earlier, we weren't going to choose a cask or a
11 canister that was not licensed for transfer,
12 transport.

13 Additionally, I want to point out that
14 the thick-walled casks have the worst shielding
15 performance of any of the options out there because
16 they have to be transported and because they don't get
17 an extra shielding cask around them during transport.
18 They don't have quite as much shielding as the other
19 designs.

20 So I want to address the naïve notion
21 that thick is always better than thin. You need to
22 look at the materials involved. The thick casks are
23 made of cast iron. Cast iron was used extensively
24 before steel was invented. It was generally replaced
25 by steel except in applications where, while being an

1 inferior material, it can be used to provide adequate
2 service at a lesser cost. That's where cast iron is
3 used today. It's generally the cheaper option.

4 And I also note that the thickness of
5 these casks that I hear talked about keeps growing.
6 They're not 18 to 22 inches thick. They're 10 to 14
7 inches thick. Eighteen to twenty-two inches thick
8 would be too heavy for the installed infrastructure.
9 And that 10 to 14 inches includes layers of shielding.
10 It's not all cast iron. The shielding doesn't
11 contribute any to strength or corrosion resistance.

12 And speaking of corrosion resistance,
13 cast iron is not corrosion resistant, okay. I'm going
14 to tell you a story about an operating plant in Ohio.
15 At this operating plant in Ohio, the reactor vessel
16 head is 6-1/2 inches thick carbon steel. It has a
17 quarter-inch thick lining of stainless steel. The
18 carbon steel is like cast iron, only much stronger,
19 but similar corrosion resistance. The quarter-inch
20 stainless steel is like the ductal stainless steel
21 that's used in canisters in the United States and at
22 San Onofre.

23 So in 2002 at this plant in Ohio, the
24 Davis-Besse plant, the staff allowed the reactor
25 vessel head to be exposed to a corrosive environment.

1 In about two years, a hole 4 inches by 5 inches was
2 corroded completely through the 6-1/2-inch thick
3 carbon steel vessel head. That's the material that's
4 similar to what the thick-walled canisters are made
5 out of -- casks are made out of.

6 The only thing that prevented a leak, a
7 through-wall leak spilling reactor coolant water into
8 the containment was the quarter-inch-thick stainless
9 steel on the outside, which was resistant to the
10 corrosive attack. The pressure of the reactor vessel
11 is 2,250 pounds. The temperature is 650 degrees. The
12 quarter-inch-thick stainless steel held back the
13 pressure and was undamaged.

14 So think about what you're asking for.
15 Thicker isn't necessarily better.

16 The bolted-lid casks are used
17 extensively in Europe where fuel is removed from the
18 casks for reprocessing. And in my opinion, safety
19 standards are not as high as they are here in the
20 United States.

21 The Davis-Besse event was a watershed
22 for the nuclear industry. It should have never
23 happened. People were fired. People were convicted
24 of felony crimes. People were barred from every
25 working in the nuclear industry again. But I've told

1 this story only to show you what happens when carbon
2 steel is exposed to a corrosive environment.

3 This is the DOE Atlas railcar.

4 MR. VICTOR: Did you have another
5 question, Martha?

6 MR. STEPHENSON: Question?

7 MR. VICTOR: Any other comments or
8 questions from the panel about the bolted -- okay.
9 Dan Stetson?

10 MR. STETSON: Yes. As you probably
11 know, Holtec is a selected supplier or vendor, but
12 Holtec also manufactures a double-walled canister that
13 they use in Ukraine and in South Africa. Did you also
14 evaluate those canisters for selection?

15 MR. STEPHENSON: No, if they're not on
16 the list, they didn't. I didn't do this analysis, but
17 I don't think they were available in the U.S. at the
18 time. I -- I'll have to get back to you on that,
19 though.

20 MR. VICTOR: Great, thank you. I'm
21 confident that the system I saw would not meet your
22 seismic needs of 1.5g, but it'd be great to get back
23 to us. Just, if you'd go back to that slide for a
24 moment. My understanding is that the Areva system,
25 TN40HT is the system at Prairie Island. Is that still

1 in operation?

2 MR. STEPHENSON: That's correct. It's
3 in use at Prairie Island.

4 MR. VICTOR: I'm going to say that I
5 really -- I'm very sorry that Ted Quinn is not with us
6 tonight, 'cause these are topics that Ted would be
7 able to help us with, and our thoughts are with him.
8 His daughter and grandchildren were in a horrible car
9 accident earlier today. They are fine. The car is
10 not, but he's understandably with his family. Thank
11 you.

12 MR. STEPHENSON: Thank you. Okay.
13 This is the DOE Atlas railcar. Railcar technology is
14 fully developed, okay. It will be available when we
15 have a place to ship the fuel. If a government
16 facility like Yucca Mountain becomes the place where
17 the fuel goes, it's likely a version of this DOE Atlas
18 railcar will be used to transport it.

19 This railcar will handle the shipping
20 casks that are available for both the Orano and the
21 Holtec canisters. Currently, they both have approved
22 canisters. By the time it's time to ship, the new
23 version, you know, may go from the 190 to the 290 to
24 the 390, just like your car, but when it's time to
25 ship the fuel, I'm confident that transportation will

1 be ready, okay.

2 Now, one reason we did pick the Holtec
3 and the Orano canister is because they are widely used
4 in the United States. They're number one and number
5 two. So anybody that builds a storage facility,
6 anybody that builds a final resting place for these
7 canisters will accommodate these canisters. They're
8 the most common canisters. So that's one of the main
9 reasons that we chose them.

10 Okay. So in review, we made sure to
11 choose a design that was licensed for storage and
12 transportation. We made sure it was long enough for
13 our fuel and high enough -- and met our high seismic
14 requirements. Additionally, we did some other unique
15 design things at SONGS that led the industry. Since
16 then, other utilities have followed our lead, although
17 most have not. We're still leading.

18 We chose to make our canisters 25
19 percent thicker, okay. It was purely margin against
20 corrosion or anything else that might come along to
21 challenge the canisters. For example, the scratches
22 that you all are aware of, I'll give you some numbers
23 now.

24 The deepest scratches that we observed
25 in our extensive inspections were 26 thousandths of an

1 inch deep. We conservatively predicted that the
2 deepest scratch would be 62 thousandths of an inch
3 deep. The extra eighth inch that we added, that's 125
4 thousandths right there. So even the deepest
5 potential scratch will only go halfway through the
6 margin before it ever gets to the licensed thickness.

7 So the licensed thickness, which in
8 itself has margin, won't be touched until we get
9 through the eighth-inch margin. So that's the kind of
10 protection that adding margin, the conservative
11 decision-making we did does for you, okay.

12 We also made our canisters of 316L low
13 carbon austenitic stainless steel, which is recognized
14 for its strong resistance to chloride-induced stress
15 corrosion cracking, which I'll talk more about later.

16 Moving on to fabrication, we made
17 several enhancements to fabrication to improve the
18 performance of the canisters. We did laser peening to
19 eliminate surface stresses. We've talked about this
20 before, and I think we've had presentations at the CEP
21 before. It was a big deal to peen all the shell welds
22 of the canisters. It was driven by an engineering
23 recommendation, and it's an excellent example of
24 conservative decision making that this recommendation
25 was adopted.

1 This makes the weld area much more
2 resistant to stress corrosion cracking. We lead the
3 industry here, and we're still the only utility to
4 peen our canister welds.

5 We used a two-pass weld technique for
6 all the shell welds. This puts less heat into the
7 weld. Less heat means less heat-affected zone, and
8 less heat-affected zone means less susceptibility to
9 SCC. I know that's kind of technical. Bottom line is
10 less susceptibility to stress corrosion cracking,
11 which I'll talk more about soon.

12 We then over-rolled the shell to create
13 a compressive stress layer. What's over-rolling mean?
14 Well, when we rolled it up into a cylinder, we rolled
15 it past where it needed to be rolled. Then we pulled
16 it apart. That imparted a compressive stress into the
17 outside of the surface of the shell. Maybe that's
18 obvious to some people, but if it isn't obvious, just
19 trust me, that puts a compressive stress, which we'll
20 talk more about why that's important when it comes to
21 chloride-induced stress corrosion cracking later.
22 Okay.

23 So these are the two best designs
24 available for SONGS dry cast storage. I've talked
25 about the thorough conservative decisions that we

1 made, the criteria we used, and these are the results.

2 Okay. This is the Orano. It's
3 surrounded by a large bulk of concrete. There's
4 reinforcement in that concrete also. It isn't shown
5 there, but it provides excellent shielding, and it
6 provides excellent seismic protection.

7 This is the Holtec UMAX. The top and
8 bottom layers are three-feet thick. They have an inch
9 and three-eighths rebar reinforcing in it. The middle
10 section is concrete monolith, which provides excellent
11 shielding and protection from seismic events. The --
12 you can't see it there, but there's a three-quarter-
13 inch stainless steel shell that provides added
14 protection for the canister.

15 UNIDENTIFIED SPEAKER: Stainless?

16 MR. STEPHENSON: Yes, stainless steel,
17 thank you. So I will point out that there is an
18 option for using nadi [ph] fill or dirt in the middle
19 there where we've used concrete. Once again,
20 conservative decision making and refusing to cut
21 corners, we used high-strength concrete there.

22 Okay. So now let's talk a little bit
23 about chloride-induced stress corrosion cracking. We
24 hear it at every meeting. It sounds like it's an
25 infection and all stainless steel has it everywhere.

1 That's not the case. There are over 3,000 stainless
2 steel dry cask storage canisters installed in the
3 United States, and not one is an exhibit of chloride-
4 induced stress corrosion cracking.

5 Chloride-induced stress corrosion
6 cracking is not common. There are thousands of miles
7 of stainless steel pipes in coastal environments that
8 have not experienced chloride-induced stress corrosion
9 cracking. It occurs only when a perfect storm of
10 three conditions occur.

11 Now, you probably learned in grade
12 school or Boy Scouts or Girl Scouts that to have a
13 fire you need three things. You need -- what do you
14 need? You need fuel, you need oxygen, and you need a
15 heat source. Without -- you get rid of any one of
16 those, you don't get a fire, right?

17 Well, chloride-induced stress corrosion
18 cracking is the same way. You need three things. You
19 need a corrosive environment, you need a susceptible
20 material, and you need a tensile stresses at the
21 surface of the material. You get rid of any one of
22 those and you don't have chloride-induced stress
23 corrosion cracking.

24 At SONGS we've taken steps and
25 sometimes very big steps to minimize all three of

1 these necessary components of chloride-induced stress
2 corrosion cracking. We make sure our canisters are
3 kept dry. Without them being wet, you cannot have
4 CISCC. This limits the corrosive environment.

5 There is also sometimes a phenomenon,
6 which I'm sure some of you are familiar with called
7 deliquescence. Deliquescence is a set of conditions
8 that when they occur, you can get a wet salt deposit
9 on a surface. Those conditions are also very
10 uncommon, and they're also unlikely to occur in our
11 vaults where the canisters provide a heat source.

12 Okay. We chose 316L stainless steel
13 over the standard 304 stainless steel. It may be
14 slightly more effective, but as I keep -- or more
15 expensive, but as I keep saying, we don't cut corners.

16 We made several fabrication
17 improvements, which I told you about earlier, peening,
18 two-pass welding and over-rolling. We still recognize
19 chloride-induced stress corrosion cracking as the
20 biggest threat to dry cask storage, but I wanted to
21 correct the misinterpretation and the misconception
22 that it's everywhere and there's nothing you can do
23 about it. That's simply not true.

24 MR. VICTOR: Before you go on, I just
25 want to see if there are any -- this has been in the

1 press a lot. We're hearing a lot from the members of
2 the public. Are there any comments or questions about
3 this topic before we move on to peening, which, I can
4 say not to disparage peening, is something we hear
5 less about?

6 [No audible response.]

7 MR. VICTOR: I want to just make a
8 comment, if you can just go back to the previous
9 slide. One of the things really striking about the
10 Koeberg experience is, as I mentioned earlier, the
11 tanks where this has been most -- they've actually had
12 this problem on some piping on the exhaust stacks for
13 now, I believe, all of the diesel backup generators,
14 'cause they're tested every two weeks so they cycle
15 between cold and hot, with the pipe being the same
16 situation.

17 The water storage tanks, RWSTs, which
18 is the large tanks where this issue has been really
19 acute, they've replaced one of those tanks now, and
20 they've learned a huge amount monitoring now the
21 propagation of cracks and looking at the properties.
22 And in addition to the fact that the tanks change
23 temperature and are cold and therefore have one of
24 those conditions there, which is low temperatures
25 along with salt and water, they're made out of 304L.

1 And the tanks, because they're giant
2 tanks that hold water, they're thicker on the bottom
3 where there's more pressure, and they're thinner on
4 the top. And what's happened is, the top segments,
5 the 5 mm and 10 mm segments are the segments where
6 they've seen the cracking, and they haven't seen it at
7 the bottom. And so the new tanks that they bought and
8 are installing have a different material. I don't
9 know if they're doing 316L, and they have a different
10 thickness, and it's all because of this.

11 And so I would be curious, maybe not
12 now on the spot, 'cause it's an unfair question, it
13 would be very helpful for us to know what the view is
14 about the improved integrity of reduced susceptibility
15 to stress corrosion cracking from 316L compared to
16 304L, which is now widely used in the industry.
17 'Cause I think it's really important that if we're
18 going to look to other places and learn about what the
19 real risks are, we need to look to other places that
20 are using the same materials and understand if they're
21 not using the same materials but the conditions are
22 different, how those differences really matter.

23 And so maybe you could help us. Maybe
24 in the refresh document there could be some comments
25 about what the added value is of 316L over 304 --

1 MR. STEPHENSON: So 304L would be
2 better than 304, but not as good as 316L. So the only
3 reason they use 304L instead of 316L that I can think
4 of would be cost savings.

5 MR. VICTOR: Yeah, I guess -- not on
6 the spot now, but I'm just wondering 'cause if there
7 is some science behind the improved protection against
8 corrosion cracking, let's find out, let's understand
9 what those numbers are and what the extra layers
10 between thickness in material, the extra protection
11 that comes from this. Martha, did you have a comment?

12 MS. MCNICHOLAS: Yeah. Just a question
13 on the comparison to the South Africa plant. When I
14 read that, all the analyses about the cracks and
15 leaks, those are water tanks, right?

16 MR. STEPHENSON: Yes.

17 MS. MCNICHOLAS: Those aren't tanks
18 used for spent fuel. They're used for water.

19 MR. STEPHENSON: Right, yeah.

20 MS. MCNICHOLAS: So that's why you see
21 leaks. I just want to make sure I understood.

22 MR. STEPHENSON: Well, you could have
23 cracks in any stainless steel if it --

24 MS. MCNICHOLAS: If the conditions are
25 right, right.

1 MR. STEPHENSON: -- gets the perfect
2 storm, the three things together and develops the
3 CISCC.

4 MS. MCNICHOLAS: Right, okay. Just, I
5 wanted to confirm what they saw there was not in a
6 storage, spent fuel storage tank, it was in a water
7 tank.

8 MR. STEPHENSON: Cold and wet is bad.
9 Warm and dry is good.

10 MS. MCNICHOLAS: Yeah. Understood.

11 MR. VICTOR: Yeah. Thank you, that's a
12 very helpful clarification because the reason the
13 water matters for us is because it has an impact on
14 the temperature, which means these things are cold and
15 they're in this hostile environment with this -- you'd
16 love it, it's shark-infested waters and also all the
17 stuff coming off the ocean and the cold temperatures,
18 that's the combination.

19 MS. MCNICHOLAS: Thank you.

20 MR. VICTOR: Okay. Any other comments?
21 We should let you go on.

22 MR. STEPHENSON: I'm not trying to
23 rush. I'm just trying to keep up with the slide.
24 Okay. So I wasn't going to say a lot about peening
25 today, just how -- what a wonderful improvement it was

1 to take on this project and peen all of our canisters.
2 I'll point out, this is the laser here,
3 a very high-powered laser. It's on a robotic arm
4 that's computer numerically controlled. It's just
5 wizardry. The canister here is on rollers, and it's
6 also computer controlled so that the peening takes
7 place in a very carefully-controlled -- it's just
8 super high tech. It's great that we took technology
9 developed for the military for the F-16 fighter
10 airplanes and we put it on our canisters and it
11 provides a great benefit as far as resistance to
12 stress corrosion cracking.

13 (Audience member spoke without
14 microphone.)

15 MR. STEPHENSON: I wasn't going to take
16 questions now.

17 MR. VICTOR: Yeah, let's continue on,
18 and we'll make sure questions are answered at an
19 appropriate time.

20 MR. STEPHENSON: Okay. Canister
21 inspections. Big picture, all of the ISFSIs in the
22 United States eventually will inspect canisters.
23 Okay. Most ISFSI, including our TN ISFSI will do it
24 about 20 years as part of the start of the aging
25 management program.

1 Operating nuclear power plants, though,
2 do a lot of inspections. They've been doing
3 inspections for decades. In-service inspection of
4 steel components is not mysterious. There's an entire
5 inspection industry out there. There are techniques
6 developed for every application. For example, in
7 operating nuclear power plants, ultrasonic testing is
8 used extensively on safety-related code welds, okay.

9 Loaded canisters have been inspected at
10 both NUHOMS ISFSIs and at Holtec ISFSIs. SONGS
11 recently robotically inspected eight canisters at the
12 Holtec ISFSI with a specially developed 3D camera with
13 a resolution of one-one-thousandths of an inch.
14 That's one-fifth the thickness of a sheet of paper.
15 This was a first of a kind in the industry, and EPRI
16 has nominated two of our engineers for a technology
17 award. Brandel Grannis [ph] and Alan Williams [ph],
18 could you stand up and wave?

19 (Applause.)

20 MR. STEPHENSON: Our canister
21 inspections will continue at SONGS in 2021 with the
22 baseline inspection for the NUHOMS ISFSI, like I say,
23 as part of the aging management program. And in about
24 2024, SONGS will likely inspect more Holtec canisters
25 as part of a State of California required inspection

1 and maintenance plan, even though the regulatory
2 requirement to do this inspection wouldn't be till
3 2035. We're once again accelerating and not cutting
4 corners.

5 Okay. Let's see. Okay. So this is
6 the robot that was used to do the Holtec inspections.
7 This is the 3D camera. Okay. It's mounted on the
8 side of the robot. You could also mount any current
9 testing equipment there. You could also mount UT
10 equipment there. And we will be able to mount
11 mitigation and repair technology equipment there also.

12 So the nondestructive examination
13 industry is very mature. There are algorithms to tell
14 you what type of inspections to do. So, you know, we
15 did a visual inspection, because visual inspection is
16 the appropriate technology to use right now. When it
17 comes time to do other types of inspections, we'll do
18 other types of inspections.

19 I want to be clear, we can inspect
20 canisters. We have inspected canisters, and the
21 industry will continue to inspect canisters.

22 MR. VICTOR: I'm sorry. Dan Stetson?

23 MR. STETSON: A quick question if I
24 may.

25 MR. STEPHENSON: Yeah.

1 MR. STETSON: There's been quite a bit
2 of discussion in the community about the number eight
3 in terms of the sample size. What's magic about the
4 number eight? Why did you pick that? Why not do
5 more? Is it based on cost, or how did that number
6 come up?

7 MR. STEPHENSON: The math behind the
8 number eight is very well developed and very
9 sophisticated. It doesn't mean -- you know, you hear
10 95 mentioned. That doesn't mean that there's a 5
11 percent chance that something is going to fail, okay.

12 So the 95/95 selection criteria that
13 came up with eight canisters, that is based on our
14 extensive inspection of eight canisters, which a lot
15 more than eight observations, a lot more than eight
16 data points go into it. We inspected eight canisters,
17 but we had a lot more data than that. And then we
18 conservatively postulated a deepest scratch of a
19 sixteenth of an inch, 62 thousandths, which is, again,
20 only ten percent of the total wall thickness. And in
21 the end it comes out to bound our entire population to
22 show that it's safe.

23 MR. VICTOR: Dan, you have a quizzical
24 look on your face.

25 MR. STETSON: That may not be as clear

1 as --

2 MR. VICTOR: Can I try to reform what
3 Doug --

4 MR. STEPHENSON: Yeah, go ahead.

5 MR. BAUDER: I just wanted to mention
6 that when Jerry talks about data, we don't think of a
7 canister as a data point. So when we looked with our
8 3D camera, we looked at these eight canisters. And
9 every place we had a rub mark, every place we had some
10 sort of indication we should look at it through
11 incidental contact or anything else, we ran the camera
12 through there, and then we added the borescopic [ph]
13 head for the more detailed inspections as needed. So
14 we have a lot of data.

15 MR. VICTOR: I see. And so if I could
16 just reformulate what I think Jerry said, to add onto
17 this. You postulated what the maximum potential
18 scratch would be, which is a sixteenth of an inch,
19 which is already only eating into half of the
20 potential margin.

21 And then based on that you figured out
22 what the sample size would need to be in terms of
23 numbers of canisters. But actually in terms of
24 surface area, it's much larger than eight. It's, you
25 know, whatever, however many square meters or whatever

1 units you're using, cubits, and then you went off and
2 measured. And had you found something greater than a
3 sixteenth of an inch, then you would have changed your
4 inspection routine.

5 So this was driven by the risk analysis
6 in the beginning, which deposited the maximum
7 potential scratch as a sixteenth of an inch, and then
8 you do an inspection routine on that, and then you
9 update your priors. That's kind of the basion logic
10 here.

11 MR. STEPHENSON: Exactly. In fact, the
12 maximum depth of any scratch that we found went into
13 the algorithm. So the deepest we found was 26
14 thousandths. If we'd found one 27 thousandths, that
15 would have changed it.

16 MR. VICTOR: Okay. So I think that's
17 actually very helpful. I think this whole, as of a
18 couple nights ago, this whole question of the sampling
19 around 95 percent has gotten muddy. The waters are
20 muddier than they were before. And it seems to me
21 that maybe we could help separately exchange a letter
22 or something like that, that would just in plain
23 English write down how these risk-driven inspection
24 regimes are done so that people aren't thinking, well,
25 that still means there's a five percent chance that

1 something terrible is going to happen. In fact, it's
2 the opposite.

3 MR. STEPHENSON: So there's a five
4 percent chance it could be just barely greater than 62
5 thousandths deep, not through wall.

6 MR. VICTOR: Okay.

7 MR. STEPHENSON: So inspecting more
8 canisters is a very, very small return on investment,
9 or return on effort.

10 MR. VICTOR: All of that, I believe,
11 has been lost in the last two days, and maybe we could
12 recover the statistics behind this. Thanks.

13 MR. STEPHENSON: Okay. So all I was
14 going to say remaining on this slide is this here is
15 the deployment tool that was built to put the robot
16 into the canister enclosure. And this is the top of
17 the canister right here. So the top of the canister
18 is very thick. So there's not a lot of dose coming
19 out of there. And this is the shield ring that's --
20 the infamous shield ring. That ring is there to
21 protect the workers from dose. That's why it's there.
22 It isn't just there to cause us a challenge when we're
23 downloading a canister.

24 So the shield ring is here. The top of
25 the canister is thick. Even with those two things to

1 protect dose, there's still some dose at the top of
2 the canister. So the -- our robot vendor built this
3 deployment tool and it just worked excellently. Once
4 again, tip of the spear for technology. Okay.

5 This is the robot that is used to
6 inspect a NUHOMS TN canister. It's been used
7 extensively at other utilities. We'll use it for the
8 first time in the fourth quarter of 2021. Okay.

9 This is the inspection ring, okay. So
10 that robot that I just showed you, okay, it can do
11 visual inspections, but right now it doesn't do
12 anything but visual inspection. So to do other
13 inspections besides visual or to do any repair, this
14 inspection ring has been developed.

15 Okay. So this is a simulated piece of
16 a canister. This is a ring on which instruments can
17 move around and around. These are three instruments
18 mounted on the ring. It's a circular track that they
19 can all go around. Out here there will be shielding
20 and things. This bolts onto the end of the NUHOMS
21 storage system. And you pull the canister out through
22 it, and you can inspect it as it comes through the
23 ring.

24 So this provides you excellent access
25 to the canister to do any types of inspections or any

1 type of repair that you need to do.

2 We're also leading the industry in
3 this. We are the first utility to have developed it,
4 although the entire NUHOMS fleet will benefit from our
5 work. It'll be ready for deployment by the end of the
6 year.

7 I think these are the things I just
8 told you. Okay.

9 So now I want to talk about
10 remediation.

11 MR. VICTOR: Any comments or questions
12 on this here? We've heard this number 99 percent with
13 regard to the Holtec system, the fraction of the
14 canister surface that can be inspected, everything
15 except for the bottom plate, but the bottom plate is
16 giant and nobody's worried about that. What is the
17 percentage for the transnuclear --

18 MR. STEPHENSON: The Orano --

19 MR. VICTOR: -- call it now, the other
20 system.

21 MR. STEPHENSON: Yeah. So you pull it
22 out through the inspection ring. You can inspect 100
23 percent.

24 MR. VICTOR: But you're not going to
25 pull canisters out as --

1 MR. STEPHENSON: Willy-nilly, no.

2 MR. VICTOR: -- you will.

3 MR. STEPHENSON: No, we won't pull them
4 out unless there's a reason to.

5 MR. VICTOR: Okay.

6 MR. STEPHENSON: Okay.

7 MR. VICTOR: So the question is, for
8 the robot, what's the fraction of the canister that
9 you can look at?

10 MR. STEPHENSON: The robot only sees
11 the bottom third or 40 percent or so of the canister.
12 There's work to develop other robots, which we're not
13 as involved in that. We're more focusing on the
14 inspection ring.

15 MR. VICTOR: It would be helpful when
16 the time is right, which might be now or soon, not
17 tonight, to -- every time we get an update on this
18 defense-in-depth -- by the way, I just really
19 appreciate these continued updates, more
20 information -- to then understand why we think the
21 bottom third is the right portion of the canister to
22 be looking at.

23 What one learns from that, that would
24 then trigger the potential use of this inspection
25 ring, and what does that regime look like. I think

1 that would be helpful for people to understand that
2 and have confidence in that system.

3 MR. STEPHENSON: Well, recognize that
4 the Orano canister on its side would be warmest at the
5 top. So the bottom would be the coolest section,
6 which would be subject to wetting first, so. That's a
7 good place to look.

8 Okay, moving onto remediation. Before
9 I talk about remediation, I want to remind you that we
10 do not anticipate the need in our lifetimes for
11 remediation, if ever. Like I said before, chloride-
12 induced stress corrosion cracking is not common, and
13 we don't expect it. We've taken every opportunity to
14 minimize or prevent it.

15 The NRC has even gone on record to
16 state that they expect it'll take at least 80 years
17 for chloride-induced stress corrosion cracking to make
18 a through-wall crack on even a half-inch canister in
19 Southern California. Our canisters are five-eighths-
20 inch thick, 25 percent thicker.

21 So it's extremely conservative and even
22 extremely proactive for us to prepare for a worst-case
23 situation that we believe, we have every reason to
24 believe will never -- we will never face. That said,
25 SONGS continue to work with the industry to develop

1 mitigating techniques. I pointed out how we lead the
2 industry in many areas. So you can expect that we
3 will lead the industry here, too.

4 Areas where work has been done in the
5 industry includes robotic weld repair. This would be
6 delivered by a robot, either the Holtec robot that we
7 saw earlier or mounted on the inspection ring for the
8 Orano system.

9 A second strategy would be an overpack,
10 either a transportation cask or some sort of
11 specially-developed container.

12 MR. VICTOR: Should we be asking Holtec
13 about the mobile robotics? Earlier we had heard from
14 Holtec that their preferred strategy was to do an
15 overpack, and now it looks like robotic weld repair is
16 also an option. Where are we in thinking about which
17 of the two options is better, or does it just depend
18 on what the situation is?

19 MR. STEPHENSON: It probably depends on
20 the situation. And it would be up to the licensee
21 rather than Holtec. We would choose whatever
22 technology is available. And a lot of the stuff being
23 developed is being developed without Holtec's help.
24 Not that they declined, it's just not their area of
25 expertise.

1 MR. BAUDER: David, I just want to
2 comment in this area. We're doing some things that
3 are sort of cutting edge. They're not fully developed
4 yet. We're working through those. We are utilizing
5 robotic technology, I'll say that. But we will be
6 sharing those at a future meeting.

7 MR. VICTOR: Okay. So that's beyond
8 these two options.

9 MR. BAUDER: Yes.

10 MR. VICTOR: Okay.

11 MR. STEPHENSON: Okay. So the
12 remediation -- as Doug said, the remediation
13 technology is under development and will be available
14 soon. It'll be available in time to support the
15 Holtec INM [ph] plan development, which is due in
16 October 2020.

17 For the Areva system, it will be
18 available before the first inspection of Areva in
19 2022. I thought I had that on this slide. But
20 anyway, mitigation will be available to support both
21 of these inspections.

22 I want to leave you with this thought.
23 While it's very unlikely we would ever need it, we can
24 repair these canisters, and we will present this
25 technology to you soon. Thank you, very much.

1 MR. VICTOR: Thank you. Thank you,
2 very much. Are there comments or questions people
3 would like to make?

4 [No audible response.]

5 MR. VICTOR: Okay. Seeing on -- we
6 are -- I want to remind everybody if you would like to
7 make a comment during public comment, please put your
8 name on a card so we can keep track of that and get
9 you up here. And the information booths are available
10 right now, and we're going to take a ten-minute break,
11 and then we'll resume with other comment at 7:25.
12 Thank you.

13 (Off the record.)

14 MR. VICTOR: First, we're going to
15 hear -- folks. First we're going to hear from Cindy
16 Gritter [ph] from Congressman Levin's office. So just
17 give us another 30 seconds, Cindy, and the floor will
18 be yours. Okay. We've got three minutes. Cindy
19 Gritter from Congressman Levin's office, the floor is
20 yours.

21 (Simultaneous background
22 conversations.)

23 MR. VICTOR: Okay. Please. We've got
24 a lot of folks who want to comment. So let's make
25 sure we give them as much time as possible. Cindy,

1 the floor is yours.

2 MS. GRITTER: Is the microphone on?

3 MR. VICTOR: Yes, it is.

4 MS. GRITTER: Is that good? Okay.

5 First, I wanted to mention that unfortunately the
6 Congressman couldn't be here tonight, but I'm going to
7 be making some remarks on his behalf.

8 Thank you to the community engagement
9 panel for hosting this meeting, and thanks to the
10 members of our taskforce who are in attendance
11 tonight. I wanted to share some actions I've been
12 working on in Washington to help remove the spent
13 nuclear fuel from San Onofre so that the site can be
14 fully decommissioned.

15 First, I led a number of my colleagues
16 in an effort to secure 25 million dollars in federal
17 funding, which, I believe, Victor referred to earlier,
18 to support the development of the Department of
19 Energy's consolidated interim storage program,
20 complete the necessary applications for interim
21 storage, and assist with site preparation activities
22 and regional transportation efforts of spent fuel.

23 Consolidated interim storage is
24 currently the most viable path for getting the spent
25 fuel off the beach. So I'm doing all I can to fund

1 these efforts. Ultimately, I was successful in
2 getting this 25 million dollars included in a bill
3 that passed the House of Representatives. Now, we
4 will need to ensure that the Senate funds interim
5 storage efforts as well so that the funding remains in
6 final funding bill for 2020.

7 Additionally, earlier this year I
8 introduced the Spent Fuel Prioritization Act, which
9 directs the Department of Energy to prioritize taking
10 title to spent fuel located at decommissioning and
11 decommissioned reactors in areas with the largest
12 populations and in areas of high earthquake hazard.
13 This will help to ensure that the spent fuel at SONGS
14 is moved first once we have somewhere to put it, given
15 the heightened risk around the plant.

16 My bill has already received a hearing
17 before the Energy and Commerce Committee, and I've
18 continued to discuss the legislation with my
19 colleagues in an effort to ensure it is included in
20 any legislation on spent nuclear fuel that may advance
21 through the legislative process.

22 Last week, my bill got a boost from the
23 California State Legislature. A bipartisan group of
24 state senators came together and submitted a joint
25 resolution to support it. I'm grateful to see this

1 strong support for our bill. It's a reminder that not
2 every issue is partisan, and that we have priorities
3 we can all agree on. I remain hopeful that we can
4 come together for the health and safety of our
5 residents.

6 Lastly, I've co-sponsored legislation
7 that will authorize the Department of Energy to take
8 title to spent nuclear fuel in order to store it in a
9 consolidated interim storage facility. This is the
10 policy that we need to pair with the 25 million
11 dollars in funding I'm working to secure. A site may
12 only be selected under the bill if relevant state,
13 local, and tribal governments sign off on the project.
14 I'm working with my colleagues to move this bill
15 forward.

16 I'm happy to work with anyone who wants
17 to address the challenges at San Onofre. So please
18 feel free to stay in contact with me and my staff.
19 Thank you for your continued work on this issue, and
20 thank you for the opportunity to speak this evening.

21 MR. VICTOR: Thank you for your
22 remarks, and please extend our thanks also to
23 Congressman Levin for his interest in this work and in
24 good resolution of this issue. Next is Gary Headrick
25 and then Gene Stone [ph]. Gary Hedrick, the floor is

1 yours.

2 MR. HEADRICK: Good evening. I'm Gary
3 Hedrick with San Clemente Green. My wife and I
4 started that local concerned citizens group in 2007,
5 and in 2010 we were approached by people who were
6 working at the power plant who came to us out of fear
7 of retaliation from management. And at the time Doug
8 Bauder was one of the key people that was referenced
9 to us particularly as being especially aggressive
10 towards people concerned with safety complaints.

11 So as much as I'm sorry that Tom
12 Palmisano chose to lie to us about the potential drop
13 of the canister, I'm equally concerned about Doug's
14 past, and the past of our -- not only the past record
15 of Edison having the worst safety complaint record
16 while they were operating the plant, but now we're
17 trusting them to be the keepers of our safety in a way
18 that seems to me, from whatever I hear, it's a rush to
19 get this problem solved, which we all appreciate.
20 Obviously we don't want to live with the danger any
21 longer than we need to.

22 But it doesn't make sense to me, even
23 as a layperson, with all the technical reassurances we
24 hear, that we have canisters that were really only
25 intended for temporary use while we waited for the DOE

1 to pick the waste up in 1998, I believe.

2 So we're using canisters that were the
3 thin temporary variety, not knowing that we wouldn't
4 have a place to receive this waste. And on top of
5 that, now we're expecting to kind of experimentally
6 figure out how to transport this waste to a temporary
7 consolidated interim storage site.

8 And the waste that we're going to
9 deliver to them is -- some of it's already 15 years
10 old -- by the time the last canister is removed from
11 here, the earliest it can be is 30 years from now.

12 And so we're expecting another
13 community and the communities that are going to
14 receive, you know, have this pass through their towns,
15 we're expecting them to accept this questionable load
16 that cannot be inspected, as much as I hear you say it
17 can be. We can't repair them, and we have no hot cell
18 on site. We cannot -- the waste is too hot to return
19 to the pool.

20 So you're giving us a plan A, but there
21 is no plan B if something goes wrong. And that's a
22 lot to expect that someone will be willing to receive
23 the waste in any kind of condition that's
24 questionable. And like I say, I'm not an expert, but
25 I think I have valid concerns to be suspicious about

1 Edison's motives for not having this liability
2 anymore.

3 And you could say we're all on the same
4 side trying to get the waste out of here as soon and
5 as safely as possible, but you're moving forward in
6 experimental fashion that will not really promote
7 safety in removal. I'm afraid it's going to be here
8 forever.

9 MR. VICTOR: Thank you, very much for
10 your comment. Next is Gene Stone and then Ray Luts
11 [ph]. Gene Stone, the floor is yours.

12 MR. STONE: Thank you, very much for
13 everyone being here. And, Jerry, I would like to say
14 I have learned a lot from you tonight. There's a
15 couple things I'd like to talk to you about.

16 You know, defense-in-depth, defense-in-
17 depth, defense-in-depth, I have been saying this since
18 the beginning of the first meeting of the CEP, and I'm
19 glad to hear that there are some steps being developed
20 for defense-in-depth. But those -- I still haven't
21 heard anything that is going to resolve the best step
22 of defense-in-depth. And that is to have some way to
23 repair our hot box, something like that.

24 It's inconceivable to me on a moral
25 level that we could even consider building a nuclear

1 waste dump in our community that we never asked for
2 without a way to deal with a canister if it's leaking,
3 if that, God forbid, ever happens, and I know no one
4 here wants that to happen.

5 The problem that some of us have with
6 science is that sometimes they leave ethics behind and
7 they just want to do something. And you'll design
8 something, but I didn't hear a guarantee from Mother
9 Nature that she wouldn't go beyond your design
10 criteria. There might be an event that happens that
11 goes way beyond your design basis, and then, well,
12 we'll have a problem, a bigger problem to deal with.

13 But I want to congratulate everyone for
14 coming together, working together, and I want to thank
15 Mike Levin for allowing many of us to be on his
16 taskforce. And I would like to publicly tell Doug
17 that I would like to be able to help you with your
18 radiation monitor. I'd like to consult with you on
19 that so that I can share with the public what's going
20 on and when it's happening, and to make sure that we
21 get that to the point where a majority of the citizens
22 are going to be satisfied with the result. Thank you,
23 very much.

24 MR. VICTOR: Thank you, very much for
25 your comment. Next is Ray Luts and then James, I

1 think it says Cummings [ph] here. Ray Luts, the floor
2 is yours.

3 MR. LUTS: Hello, Ray Luts with
4 Citizens Oversight. Thank you for letting me speak.
5 The door closures issue. So Holtec said, we made a
6 mistake before, our calculations were wrong, but now
7 we can let the door stay closed a lot longer than
8 that.

9 That reminds me of the time they said
10 that it was okay not to inspect these. They're
11 supposed to be inspected every 24 hours. They said,
12 it's okay to only inspect them once every 30 days,
13 because we think it's okay for them to go up 1,200
14 degrees Fahrenheit instead of just 675 degrees
15 Fahrenheit.

16 And so that's why we said no, you know,
17 it's like putting a baby alarm in the room and saying
18 check your baby every hour, and the parent says, oh
19 I'm not going to do that. I'll do it once a week. So
20 this is what we get. We get lousy quality.

21 So the door closure issue, let's see --
22 I want to see the analysis of that. When did Holtec
23 say they were wrong before and suddenly right now?
24 Now SCE says they had no alarms when they were
25 lowering these. The question was did it hang up on

1 the ring. Wasn't answered. I tried to interject to
2 answer the question. The chair did not force an
3 answer from SCE. Did it get hung up or not? Because
4 just not having alarms is not the answer to the
5 question. That's another question that you didn't
6 answer.

7 David Victor, you're on the site of the
8 utility too much. Did you inspect canisters 30 and 31
9 after you put them in to see if you had scratches?
10 That'd be a pretty good test. With all this new
11 stuff, do you still scratch them? What impact does
12 the scratches have on stress corrosion cracking? No
13 one is saying that those scratches are going to be so
14 bad that suddenly the canister itself is not --
15 doesn't have integrity. No one says this.

16 The reason there are problems is
17 because it's going to induce corrosion there. Doesn't
18 that defeat the purpose of the peening? You got big
19 scratches now on the surface. That's where you're
20 going to start corrosion, in those cracks.

21 The canisters at Chernobyl were custom
22 designed. People here say it's not on the list of
23 what's available, so we can't do anything. Don't we
24 have engineers in this country anymore? You can't
25 design anything that's better than that? Look, we

1 need two-layer canisters, two layers, just like the
2 Exxon Valdez. Hit the rocks, they decided they need
3 two layers.

4 Do we have to wait for an Exxon Valdez
5 accident here before you guys will do better
6 canisters? These canisters were never designed for
7 indefinite use, yet that's what you're planning to do.
8 They were a short-term solution. Not in your
9 lifetime, you won't have to worry about it. That's
10 not the problem. We're looking at thousands of years
11 here, indefinite.

12 Pendleton option may be our only choice
13 because if they can't even put this thing in the
14 ground 1,500 feet from the site, how can we move it
15 1,350 miles. So please put that on one of our
16 options. I want to get Pendleton where the new guy --
17 Pendleton, let's hear from you why we cannot move
18 these further away from the water and above the water
19 level. Thank you.

20 MR. VICTOR: Thank you, very much for
21 your comments.

22 MR. LUTS: Please answer the questions.

23 MR. VICTOR: James Cummings and then
24 Shari Horne. James Cummings, it says retired SCE.
25 Are you still wanting the floor? Have I completely

1 destroyed your last name? Okay. I'm sorry. I could
2 not read the handwriting there, but if you think you
3 want to -- you were number four and you didn't hear
4 your name, please let me know. Shari Horne and then
5 Katie Day.

6 Let me apologize first. Shari Horne is
7 former mayor and now councilmember of the City of
8 Laguna Woods. It should be our practice to allow
9 elected officials to speak first in public comment,
10 and my apologies that we did not do that.

11 MS. HORNE: That's okay. Thank you,
12 very much for being here and for allowing me to speak.
13 I appreciate it.

14 I got to tell you, I am scared. I am
15 really scared, and the more -- I've been coming to
16 these meetings for years, and the thing about having
17 thick canisters, I know you say that thick isn't
18 better just because it's thicker, but they last 100
19 years, where these are only rated for 40 years. There
20 must be something better about them.

21 You can open them, close them. They
22 have radiation monitors in the top, and they survived
23 Fukushima and they're used all over Europe. I don't
24 know either why we can't here in America manufacture
25 canisters that are safer than these.

1 And sea-level rise, 80 years, the
2 ocean's going to be into -- they're only 12 inches, 12
3 to 18 inches above the high-tide line. It's rising.
4 We don't have 80 years. So I appreciate what you're
5 doing.

6 And these robots that inspect the
7 welds, you can't tell if a weld -- there are voids and
8 you can't see the inclusions in a visual inspection.
9 Only in nondestructive testing, in voids or inclusions
10 you can't see, you can't see in there, and not just
11 visually. So I would also hope that there would be
12 better canisters, thicker canisters that are rated for
13 longer. There's -- you have no way to pull them out
14 and change them now.

15 I know you say you'll invent something,
16 and I appreciate Congressman Levin saying that we're
17 going to move it. I've supported every interim
18 storage bill that's come around. There have been, I
19 think, two others in the past. I'm just saying, this
20 is probably going to be here for a long time. And as
21 long as it's here, I would really like it to be here
22 safely.

23 I would like radiation monitoring,
24 realtime radiation monitoring, and better canisters,
25 and probably the sirens on the beach. I just think

1 that this is not a safe system. And I wish you would
2 reconsider thicker casks or custom-made canisters like
3 people have been asking for. And thank you for
4 letting me speak.

5 MR. VICTOR: Thank you for your
6 comments. Next is Katie Day and then Stephen Vogue
7 [ph]. Katy Day, the floor is yours.

8 MS. DAY: Okay. Hello everyone. Good
9 evening. My name is Katie Day. I'm the staff
10 scientist at Surf Rider Foundation's national
11 headquarters, and I'm honored to be a member of
12 Congressman Levin's taskforce, serving on the
13 technical committee. So thank you for the CEP for
14 having us all tonight.

15 As many of you know, the Surf Rider
16 Foundation is strongly opposed to permanent or long-
17 term storage of radioactive waste at the deactivated
18 San Onofre nuclear generating station due to its
19 proximity to the coastline, susceptibility to
20 geological instability, and location within a densely
21 populated area.

22 Our staff and chapters have been active
23 at the local, state, and federal levels to advance
24 stronger policies for the on-site storage and to
25 encourage movement for eventual offsite storage away

1 from the coast. We continue to engage with federal
2 elected officials both in district and in Washington,
3 D.C.

4 To clarify, Surf Rider recognizes that
5 waste needs to be cooled on-site before it's moved,
6 and we demand that this is done as safely as possible.
7 We also advocate that the waste is moved as soon as
8 possible to a consent-based, geologically stable
9 permanent location away from the coast.

10 Based on the current engagement from
11 local federal officials, mainly with Congressman
12 Levin's lead, I think we have a real opportunity to
13 finally get the needed buy-in from Congress to fund
14 and promote a long-term solution for spent fuel,
15 including the much needed geologic repository. But
16 they need to hear our voices, and thanks to many of
17 the people in this room, our local federal electeds
18 are listening, but we need to be louder.

19 This a national problem, and
20 congressional representatives from around the country
21 must support action to handle America's stranded fuel
22 problem. And while I'm hopeful that we will see
23 action and this waste will be safely transported to a
24 longer-term geologically stable location, thank you to
25 North Wind for being -- taking proactive efforts so

1 we're ready when that time comes -- it doesn't mean
2 anything if the waste isn't safely stored while it
3 remains on-site.

4 Surf Rider continues to advocate for
5 additional on-site safety precautions. These include
6 stronger oversight and regulation by the NRC,
7 including the presence of an on-site full-time
8 inspector throughout the remainder that the waste
9 remains on-site or while the waste is transferred, not
10 just for one week a month, regulation that would
11 require Edison to retain a readily deployable method
12 on-site to be able to repackage or repair spent fuel
13 canisters in case of an emergency, a thorough
14 inspection of the magnitude and depth of scratches on
15 every canister downloaded before the August 2018 near
16 drop, not just 8 of the 29.

17 Thank you, Jerry, for giving some more
18 background. It was really great to hear some more
19 details about the process and reasoning behind this
20 decision, but I feel like it's worth it to appease
21 these community concerns. People are scared. So why
22 not give them that.

23 And then better communication regarding
24 the emergency planning both on-site and throughout
25 local communities. I understand the Inter-

1 jurisdictional Planning Committee or the IPC oversees
2 emergency planning at SONGS and is supposed to meet
3 monthly, but we haven't heard any updates about the
4 actions of this committee and if these meetings are
5 still ongoing.

6 I believe that's what Donna was
7 referring to earlier. So it would be great to get
8 more information on this going forward. Thank you.

9 MR. VICTOR: Great. Thank you, very
10 much for your comments. Steven Vogue and then Bernie
11 Thomas. Steven Vogue, the floor is yours.

12 MR. VOGUE: Hi, I'm Steven Vogue. And
13 the gentleman spoke a little while ago about the
14 perfect storm for a possible problem with these
15 stainless steel casks. I would ask what are the odds
16 of a perfect storm. Many of you probably heard
17 recently that Greenland, in one day because of a
18 unique little heat dome that came over the land, took
19 11 billion tons of ice and changed it into water. It
20 actually, they estimated, the amount of ocean level
21 rise that incurred from that.

22 If that can happen in one day, what's
23 it going to take for the ocean level to rise a couple
24 of feet. And then I understand that these things are
25 only 18 inches above sea level. We're going to end up

1 having a -- is that possibly something that would wipe
2 out the -- or let's say contribute to your perfect
3 storm.

4 And with the susceptible material
5 aspect of the canister, is it -- you said it was
6 resistant. Well, that doesn't mean that it's salt-
7 water proof, does it? Does it? I'd like an answer to
8 that question.

9 How long is the lifespan? You talk
10 about 40 years. Well, it turns out that U233 is over
11 150,000 years of half-life, and plutonium is another
12 24,000 years of half-life. What's a measly 40 years?
13 Are you able to pull these things out and inspect them
14 totally and refurbish them and repair them?
15 Especially if they're underwater. I doubt it. Thank
16 you for your time.

17 MR. VICTOR: Thank you for your
18 comments. Next is Bernie Thomas and then Jackson
19 Hinkle. Bernie Thomas, the floor is yours.

20 MR. THOMAS: Well, kind of a moot -- I
21 mean if you hadn't shut the plant down, we wouldn't be
22 having this conversation.

23 MR. VICTOR: Oh, could you speak a
24 little closer to the microphone? I just make sure --
25 thank you, very much.

1 MR. THOMAS: I mean, I worked on the --
2 I was part of the crew that did the modifications --
3 the repairs to the steam generators. If they would
4 let them start them up again, then you wouldn't have
5 this issue. And I was wondering, besides your -- the
6 fuel you're talking about, how much low-level waste is
7 still on-site?

8 I know that the last time I was there
9 the core barrel from unit one was still there 'cause
10 they couldn't ship it. So if you can't ship the low
11 level, how hard -- how can you -- how long will it
12 take you to ship the high-dose stuff. And well that's
13 it.

14 MR. VICTOR: Great, thank you, very
15 much for your comment. Next is Jackson Hinkle and
16 then George Allen [ph]. Jackson Hinkle, the floor is
17 yours.

18 MR. HINKLE: Thank you. My name is
19 Jackson Hinkle. I am an almost 20-year resident of
20 San Clemente, and I'm a candidate for San Clemente
21 City Council. I've been working on this issue of San
22 Onofre and holding you folks accountable for the past
23 few years.

24 And while I appreciate the increase in
25 safety standards that you've worked on recently and

1 you brought up tonight, San Onofre is unique amongst
2 nuclear plants in the United States for a number of
3 reasons, population density, proximity to a fragile
4 coastline, seismic risk, and many other things.

5 And it's in my eyes that because San
6 Onofre is not your typical nuclear power plant that it
7 requires, you know, better than your typical safety
8 standards. A few of those things that I believe could
9 help create increased safety standards at the plant
10 that are not currently being met are an NRC inspector
11 on plant monitoring fuel loading operations at all
12 times.

13 I believe that it's imperative that we
14 have that because the most recent incident at San
15 Onofre that involves safety concerns was less than a
16 year ago, and though each of you and your executives
17 have tried to make it clear to us that, you know, the
18 last incident was the last one that we're ever going
19 to face at San Onofre regarding safety concerns. I
20 find it hard to believe that that is the case.

21 Secondly, I believe that every canister
22 that has been loaded already needs to be inspected for
23 scratching and gouging, not just the eight that you
24 have inspected. I believe that 95 percent, 95 percent
25 confidence interval and that was the justification for

1 not inspecting every single canister that has been
2 loaded is not sufficient. I believe that the working
3 families throughout San Clemente and Southern
4 California and South Orange County deserve 100 percent
5 confidence interval that the canisters are safe and
6 secure.

7 And lastly, I believe that we need to
8 ensure that there's realtime radiation monitoring for
9 all of the canisters at the plant that are loaded and
10 are going to be loaded and that that takes place in
11 the quickest possible manner. And I want to reiterate
12 that we need full-time radiation monitoring for every
13 canister and not just eight. Thank you.

14 MR. VICTOR: Thank you, very much for
15 your comment. Next is George Allen and then Donna
16 Gilmore. George Allen, the floor is yours.

17 MR. ALLEN: Thank you. Thanks for this
18 opportunity to talk. I've worked there for 30 years
19 and as far as character reference, if you know
20 somebody, you can make a character reference on them.
21 And I would give a character reference to our
22 management, Doug Bauder. I've never had a -- he's a
23 straight shooter. If you hear something third hand --
24 if you do the wrong thing, Doug will hold you
25 accountable, and he tells you the truth.

1 So I don't know what problems some
2 other employees had, but I've never had a problem with
3 that.

4 Okay. I have a Frisker. I'm a
5 radiation technologist. You know, people talk about
6 dose rates up there. I took a Frisker, which is about
7 the lowest level monitoring device you can have. I
8 wanted on there to see. I walked around. It was a
9 little above background. So if you put these monitors
10 on-site, you won't be too shocked to realize we're a
11 little above background.

12 So a question I thought one of you guys
13 might have is of all the nuclear sites that have
14 spent-fuel storage, has any site ever given a public
15 person 100 millirem, which is the limit, ever in the
16 history of spent-fuel storage. And Jerry just said we
17 have had no leaks in any canister throughout the 25-
18 year history of spent fuel.

19 And so another thing I keep hearing in
20 the radio or an editorial that there's a 30-mile risk
21 of radiation emanating from San Onofre because of some
22 accident. If you spent money to try to prevent that
23 sort of thing, that's ill spent. The site boundary is
24 the boundary the NRC, the EPA has said is the distance
25 that radiation could affect the surroundings. So

1 we're overestimating. We don't want to protect
2 against something that's not there.

3 So that was basically what I had to
4 say. We don't have a high risk. It's been proven
5 that this system works, and these are not cheap. The
6 NRC is not a easy taskmaster. So we are meeting the
7 goals and the requirements that NRC has set and the
8 industry standard has. So thank you.

9 MR. VICTOR: Great, thank you for your
10 comment. Next is Donna Gilmore and then Jeff Stimetz
11 [ph].

12 MS. GILMORE: Thank you. Donna
13 Gilmore, San Onofre Safety. I have too many things to
14 say about Jerry's presentation that I can cover in my
15 three minutes. If people would like to have an
16 independent assessment on things, I welcome that, and
17 I think we need to organize an independent meeting.

18 Regarding inspection, people need to
19 understand, you cannot inspect for cracks with a
20 camera. You can't do it. And as they're talking
21 about inspection technology, you still need -- so it's
22 very misleading.

23 And versus thin and thick, you're
24 giving us an extra eighth of an inch for safety. We'd
25 rather have like 10 to 19 inches extra. The thin

1 canisters will crack. Once they start cracking, they
2 continue to grow. The thick cask, you can inspect
3 them. You can get close to them. The thin ones you
4 can't, or you will die. They have to be, you know,
5 enclosed in something else.

6 The thick ones can be maintained. The
7 thin ones cannot. They have an epoxy coating. Your
8 idea of rusting is totally -- you know, you know the
9 thick casks have an epoxy coating on them, okay, and
10 you did not share that. So you're misleading the
11 public here. You've lost credibility here.

12 They have a monitoring -- these are
13 pressure vessels. They have no pressure -- these thin
14 canisters, they have no pressure monitoring, no
15 pressure relieve valve. They should be complying with
16 ASME M3 nuclear pressure vessel standards. Instead,
17 the NRC gives them exemptions to those standards.
18 Thick casks can meet those standards. These toys
19 cannot.

20 Defense-in-depth, this was supposed to
21 be about defense-in-depth. We've got five-inch piece
22 of stainless steel, that's it, that can't be inspected
23 or repaired or monitored until after it leaks. There
24 is no defense-in-depth here.

25 Ideally, you should store these in

1 concrete buildings for additional security and
2 environmental protection, not almost half under the
3 beach there.

4 The thin canisters do not protect from
5 gamma and neutrons. The thick casks do. The thick
6 casks are proven transportable. These thin canisters,
7 they're unproven. The transport casks are unproven.
8 This idea you can use an overpack with a leaking
9 canister, there are none approved. They would likely
10 fail a thermal analysis. Russian dolling these things
11 isn't going to save us or ever make these
12 transportable.

13 You know, we really need -- and then
14 regarding -- okay, the Fukushima, they used a thick
15 cask. It was an Areva cask. It wasn't a ductal cast
16 iron. It survived a 9.0 earthquake and a tsunami. If
17 these thin canisters even have partial cracks, they
18 have zero seismic rating. So you're deceiving the
19 public here.

20 And there's a handout that I've shared
21 with everyone. And if you're interested in learning
22 the truth and learning things that we can do,
23 unfortunately, you're not going to learn it here.

24 MR. VICTOR: Thank you, very much.

25 MS. GILMORE: And we have a new video

1 with Doug Bauder admitting they can't use the pools to
2 unload the canisters, and we have Scott Morris from
3 the NRC saying they're out of compliance with their
4 current license.

5 MR. VICTOR: Thank you.

6 MS. GILMORE: I would like to know --

7 MR. VICTOR: Thank you, very much.

8 MS. GILMORE: I would like to know what
9 Edison is going to do now that they are out of
10 compliance with their license --

11 MR. VICTOR: Okay.

12 MS. GILMORE: -- that requires them to
13 be able to return a canister to the fuel.

14 MR. VICTOR: Question clear enough.
15 Thank you, very much.

16 MS. GILMORE: If it falls over 11
17 inches, it's required to --

18 MR. VICTOR: Next is Jeff Stimus and
19 then Charles Langley. Jeff Stimus, the floor is
20 yours.

21 (Applause.)

22 MR. STIMUS: Good evening. Thank you
23 for having this meeting and letting us speak. I want
24 to second everything that Donna said, and just say
25 that the three gentleman over here on the right have

1 unfortunately lied to you guys extensively this
2 evening. And if they weren't lying, it was a lie of
3 omission. There were several lies of omission.

4 It is a good thing that San Onofre has
5 more staff now for the loading process, but this does
6 not change the fundamental fact that the Holtec
7 canister downloading system does not have a precision
8 downloading system at all.

9 You guys know that the Areva system
10 does. It goes in on channels. With this system, you
11 guys are just trying to eyeball it. And Tom Palmisano
12 actually said that he's actually attaching a rope to
13 it. He's using Tarzan technology basically to
14 actually get this stuff into the silos without
15 scratching the sides. It's pathetic.

16 Like Ray said, I mean, this is supposed
17 to be -- do we not have engineers here anymore? Can
18 you guys not design a better system? That is
19 pathetic. That's -- he refuses to provide the
20 readings from the exhaust outlets on the Areva
21 canisters. Why? We've asked for this repeatedly.
22 They will not provide it, nor will the Nuclear
23 Regulatory Commission.

24 In terms of security, there is no
25 nuclear plant in the United States that's less secure

1 than San Onofre in my opinion. If I can walk down on
2 the beach and throw a tennis ball right up onto the
3 ISFSI, I can certainly throw a lot of other much,
4 much, much more dangerous content up on that same
5 ISFSI, and while you're loading it.

6 So the idea that this is secure is just
7 a huge, huge lie. I mean, the things are less than
8 100 feet from the bluff. Anybody who played grammar
9 school baseball can throw something heavy right up
10 there and destroy your whole process and make every
11 one of you into liars, not that you aren't already.

12 Lou, if you have always been so
13 dedicated to safety like you claim so diligently when
14 you started with your speech, then why was it that San
15 Onofre for, I don't know, eight, nine years, had the
16 worst complaint record with the Nuclear Regulatory
17 Commission? If you were so dedicated to safety, how
18 is it all your employees complained to the Nuclear
19 Regulatory Commission that they were being silenced?

20 Why is it that the Nuclear Regulatory
21 Commission had to actually come out with a letter that
22 says cooling off time? This was under your watch,
23 too, Doug, Doug Bauder. Yeah, you. Why is it that
24 your staff basically had the worst record with the
25 Nuclear Regulatory Commission?

1 MR. VICTOR: Thank you for your
2 comments. Next is Charles Langley and then Nina
3 Baviores [ph].

4 (Applause.)

5 MR. VICTOR: Please. Charles Langley,
6 you've got the floor.

7 MR. LANGLEY: Hi, I'm Charles Langley
8 with Public Watchdogs. And we've heard a lot of talk
9 about these scratches. That they're less deep than a
10 sheet of paper and relatively inconsequential. But I
11 just have one question, and that is what about the
12 dents in the canisters? Could anyone from Edison talk
13 about those dents? Whether they've been photographed
14 and how deep they are? Thank you.

15 MR. VICTOR: Thank you for your
16 comment. Next is Nina Baviores and then Harold Breen
17 [ph].

18 MR. LANGLEY: Well, we've still got,
19 you know, a couple minutes here.

20 MR. VICTOR: I'm sorry. I thought you
21 were done. Continue.

22 MR. LANGLEY: I was hoping there would
23 be an answer.

24 MR. VICTOR: At the end. It's the same
25 process we've used every single meeting, Charles.

1 MR. LANGLEY: Okay. Okay. Thanks.

2 MR. VICTOR: Thank you, very much.

3 Nina Baviores and then Harold Breen.

4 MS. BAVIORES: Well, good evening. My
5 name's Nina Baviores. I'm also with Public Watchdogs,
6 a board member, and Lou, we have something in common.
7 I was in Pittsburgh during the meltdown of Three Mile
8 Island as well.

9 I was an engineering news reporter in
10 Pittsburgh, and as a resident, I also experienced that
11 feeling of what a meltdown actually equates to in real
12 life, whether or not you even have the luxury of
13 sheltering in place, and the uncertainty of whether or
14 not you should evacuate, if you should evacuate at
15 all. And then, of course, there was the -- Edison
16 owned that plant and lied to the governor of
17 Pennsylvania, as well as the lieutenant governor.

18 But I'm here tonight really to talk
19 about something that Doug brought up. And, Doug, I
20 think these are your words just a little earlier
21 tonight. You will have issues and confusion. So I'm
22 going to talk about human error. I want to talk about
23 human error and the fear of retaliation.

24 Here's just a laundry list that has
25 gone on with Edison for a long time, all the way back

1 from the like-to-like deception of the replacement
2 steam generators. We'll be generous. We'll call that
3 a human error.

4 Radiationlly [ph], thank God, you know,
5 somebody came to Gary Headrick and we had a
6 whistleblower. Bolts and shims, you know, March 18, I
7 guess that was a human error, too. Rainwater
8 intrusion, well, that's kind of a joke to me because
9 we've been walking that cliff up there and wondering
10 that ourselves for a long time. It's really funny
11 that that just occurred to you guys.

12 July 22, I talked to the NRC inspector,
13 Eric Simpson [ph], and now they're calling it a
14 precursory event to the August 3 near-miss drop. And
15 it was a precursory event because had it ever been
16 reported as the NRC require in 24 hours by federal law
17 that was passed to protect the public safety, we
18 probably could have avoided completely the August 3
19 near-miss drop of 100,000 pounds of radioactive
20 nuclear waste.

21 Then we had one of my favorites, the
22 August 9 Tom Palmisano human error of lying to over a
23 couple of hundred people that you shut the, that you
24 shut the vareal [ph] down for maintenance reasons.
25 But honestly, one of my personal favorites is on

1 Edison's own PowerPoint. The root cause evaluation
2 that management failed to recognize the complexity and
3 risks associated with long duration fuel transfer
4 campaign while using a relatively new system design.
5 What a joke. You designed this system. How could you
6 possibly not know how long or some of the risks that
7 it would take, for heaven's sakes?

8 But the other at the NRC meeting was
9 just validation that the human error hasn't ceased.
10 Here we had, you know, a presentation, whether it's a
11 drop cloth that goes into the spent fuel pool that was
12 outlined or 100,000 pounds of radioactive nuclear
13 waste, what was apparent and in print is that when the
14 NRC released its March 18 preliminary report, there
15 was an employee survey that identified a fear of
16 retaliation that never made it to the March 25 final.
17 Why?

18 MR. VICTOR: Thank you, very much for
19 your comment. Harold Breen is next.

20 MS. BAVIORES: Because there would be
21 no corrective action required --

22 MR. VICTOR: Harold Breen, the floor is
23 yours.

24 MS. BAVIORES: -- and Edison doesn't
25 have the integrity to do it themselves.

1 MR. VICTOR: Thank you, very much for
2 your comment. Harold Breen is next, and then Madison
3 Alvarez [ph]. Harold Breen, the floor is yours.

4 MR. BREEN: I was at the meeting on
5 Tuesday night with the NRC. There was about 130
6 members of the community there. I don't know if any
7 of you might have seen it. I think there were some
8 videos posted online about it, perhaps on YouTube.
9 But there was rage expressed to the Nuclear Regulatory
10 Commission. It got loud. It almost got scary at a
11 couple times.

12 The Nuclear Regulatory Commission gave
13 us a little lecture towards the end of the evening on
14 Tuesday night, and he asserted that the Nuclear
15 Regulatory Commission has to rely on facts. A lot of
16 people scorn that, but that was what the chief
17 administrator for our region from the Nuclear
18 Regulatory Commission told us.

19 But one of the facts is that Southern
20 California Edison built its chief administration
21 building on the top of the bluff on the other side
22 east of the 5 Freeway. They also put their power
23 lines extending up the entire mountain right behind
24 San Onofre, and their power lines, these are million
25 dollar -- excuse me, million volt lines going to San

1 Diego and then to Los Angeles. These towers are 50-
2 feet tall. They extend for a long, 15, 20 miles to
3 the east of the site. Edison has responsibility for
4 those properties. It has a long-term interest and
5 easement on all that property.

6 That's where this waste should go, on
7 the other side of the 5 Freeway, not on a beach, not
8 close within 10 or 15 feet of water. Use land that
9 makes sense for putting waste in the ground for 100
10 years or 150 years. That's what has to happen. And
11 this panel should realize that, write a minority
12 report, but take the ball and take it seriously as
13 elected officials and as members of this panel.

14 MR. VICTOR: Thank you, very much.

15 MR. BREEN: Don't renege on your
16 responsibility.

17 MR. VICTOR: Thank you, very much for
18 your comment. Next is Madison Alvarez and then Andy
19 Kinnen [ph].

20 MS. ALVAREZ: Hi. Madison Alvarez,
21 also from the Public Watchdogs. In regards to bill
22 465, if and when there is another unsecured loading
23 event with the spent fuel canisters, how will you
24 alert those within the plume zone since you've
25 discontinued the siren system? I'm not asking about

1 what you're going to do in the meantime. I'm asking
2 about what we're doing now. Thank you for your time.

3 MR. VICTOR: Thank you, very much for
4 your question and your comments. Andy Kinnen and then
5 Madge Torres. Andy Kinnen, the floor is yours.

6 MR. KINNEN: Thank you, very much.
7 Good evening. I got to tell you, one of the scariest
8 lines of this evening was when a senior engineer who's
9 been at SONGS for almost four decades stated "I don't
10 know much about technology." Wow.

11 When I approached then Congressman
12 Darrell Issa approximately a year ago regarding San
13 Onofre, the waste -- and Rick Perry being in charge of
14 our Department of Energy, the Congressman's response
15 was, "Rick Perry is an idiot." Well, I got to tell
16 you, when I worked at San Onofre in the mid-80s, I can
17 absolutely tell you, as a supervisor at the plant,
18 that the radiation monitors when leaving containment
19 were not always turned on.

20 That is a time when an individual took
21 what they called a flea home that contained
22 radioactive particles. That human being is no longer
23 on the planet. She died shortly after.

24 You know, I can tell you, after
25 speaking to Representative Michael Levin, Mike Levin

1 regarding this, Mike Levin used to jog along the beach
2 in Capistrano Beach. And one of the reasons this
3 really caught his attention was the fact that the
4 erosion that Mother Nature is taking away from his
5 jogging area, and it really -- it didn't concern him
6 that it was taking his jogging area away. What
7 concerned him was the erosion that Mother Nature was
8 providing to our coastline.

9 You know, we need to take a lot of
10 things into consideration, as well as corrosion by
11 seawater and as well as, you know, we have not studied
12 these canisters for decades. I just -- you know, 80
13 years tide rising, you know, we've seen erosion on our
14 coastline in the last two years that has been quite
15 substantial.

16 So I hope some of this is being
17 addressed. I know the surfers appreciate the warmer
18 water that used to take place, but there are much
19 bigger, much bigger apples here. Thank you for your
20 time.

21 MR. VICTOR: Thank you for your comment
22 and your questions. Next is Madge Torres and then Mel
23 Carnihan [ph]. Madge Torres, the floor is yours.

24 MS. TORRES: Madge Torres from Citizens
25 Oversight. You know, when I used to think about

1 nuclear power, I used to think that -- well I knew
2 that it was being taken care of with our money and
3 that we were paying for it, and then when the time
4 came that the nuclear waste would be properly cared
5 for and disposed of.

6 But then when I found out about the
7 decisions that are being made by Southern California
8 Edison, such as the thin-walled casks and the fact
9 that there's no way to inspect for damage, you can't
10 open them up, you can't repackage them, I go, why
11 would they do that. And I recognize that the HELMS
12 program does provide some way of mitigating a leaking
13 canister by switching out the over-cask. But still,
14 that's not being adopted for one thing, at least at
15 this point it hasn't been.

16 So I'm going what's the motivation for
17 Southern California Edison burying nuclear waste.
18 People have been talking about it's above the water
19 table. That's the median water line. When they say
20 it's so many inches above the top of the water table,
21 no, that's the -- that's like the median. So
22 sometimes it's higher. Sometimes it's actually -- the
23 water's actually touching the cement that holds the
24 casks. That's the water level.

25 Anyway, I'm trying to figure out why

1 Southern California Edison would put so many people's
2 lives at risks, and I figured it out. I think it's --
3 and, oh, then I was wondering, how come nobody talks
4 about giving us all that money back that they're not
5 spending on our safety?

6 And so I'm -- what I came up with is,
7 Southern California Edison is saving that money as an
8 enticement to another company to take that nuclear
9 waste, transport it elsewhere, and take
10 responsibility. So that's the frosting. That's the
11 sweetening. All that money that's supposed to be
12 spent on our safety is being hoarded so that you can
13 get somebody else to take responsibility for the
14 nuclear risks that all these people are being forced
15 to take, even though they paid for safety.

16 MR. VICTOR: Thank you, very much for
17 your comment. Next is Mel Carnihan and then Krista
18 Gotenhauffer [ph]. Mel Carnihan, are you here?

19 [No audible response.]

20 MR. VICTOR: Nope. And then Krista
21 Gotenhauffer and then Sara Malen [ph].

22 MS. GOTENHAUFFER: Hello. Is it
23 possible for me to hold this?

24 MR. VICTOR: Sure. There you go.

25 MS. GOTENHAUFFER: One thing I really

1 liked about the NRC meeting was that the podium was in
2 a way that we could speak to the audience and the
3 panel.

4 I'd like to -- in case you didn't know,
5 in 2014, Kris Singh, the president of Holtec, came
6 before this group before the Holtec system was bought
7 and described a mating system and inspection ring very
8 similar to the Orano ring that was being proposed in
9 tonight's thing. Mr. Singh said, I'm literally
10 quoting, he said, "To inspect a Holtec canister would
11 be as easy as lifting a briefcase. You could lift it
12 within four hours." He said, "And we also will have
13 this mating device with an inspection ring for you to
14 inspect the canisters. Easy peasy." It never was
15 there when we needed to inspect the canisters.

16 I'd like to review -- something about
17 last night, people kept on saying inspect more
18 canisters. Oh, inspect more of them. Why? When
19 Edison loaded the first Holtec canister and discovered
20 there was a problem getting it through that ring, and
21 that there was banging and scraping going on, why
22 didn't Edison stop, evaluate the situation, report it
23 to the NRC, call Holtec on their system and stop the
24 loading at canister one?

25 Maybe after canister four when they

1 found the broken shims they could have done that. But
2 you waited till canister 29 where there's a near drop
3 to have the NRC come in and do a whole inspection.

4 Their inspection report last night was
5 like a training, you know, research and development
6 for Holtec workers. You're paying -- and the NRC was
7 -- we're paying the NRC to troubleshoot the Holtec
8 system. It's egregious.

9 You said tonight that the canisters
10 would be sent to a repository. Current law, nuclear
11 waste policy act requires monitored retrievable
12 storage. We now have over 2,500 canisters, welded
13 canisters loaded, none of them are retrievable. Not
14 one canister of the 2,500 has ever been opened ever in
15 this country.

16 They do not have the system. They
17 can't bring it back to the pool. They do not have a
18 fuel handling facility in the United States capable of
19 retrieving fuel from these canisters. These are
20 welded shut cans of soup that they've never opened up.

21 Someone from the Edison sent a Idaho
22 facility where a canister would be sent, it's too
23 small. It doesn't handle high burn of fuel. It's not
24 designed for these canisters. There is no facility in
25 the United States. We got to figure that out quick.

1 The time -- one last thing. They had a
2 big screen at the NRC meeting, in case you weren't
3 there. It was like the time kept going down, 2
4 minutes and 59 seconds, 2 minutes and 58, and we all
5 watched the big clock go down for each speaker.

6 MR. VICTOR: Thank you.

7 MS. GOTENHAUFFER: There was a sense of
8 urgency in that for me. And I feel there's a sense of
9 urgency in us dealing with this.

10 MR. VICTOR: Thank you.

11 MS. GOTENHAUFFER: And whether we
12 communicate with you or communicate amongst --

13 MR. VICTOR: Thank you, very much for
14 your --

15 MS. GOTENHAUFFER: -- it's time we get
16 to the bottom of this and find a solution with the NRC
17 and --

18 MR. VICTOR: Thank you for your
19 comments. Sara Malin and then --

20 MS. GOTENHAUFFER: -- or whoever's
21 going to solve this problem.

22 MR. VICTOR: -- Dara Gale [ph]. Thank
23 you for your comments. Sara Malin and then Dara Gale.
24 I may be mispronouncing your last name.

25 (Applause.)

1 MR. VICTOR: Please, Donna, we have the
2 duty to respect all the speakers, and we're going
3 to --

4 MS. MALIN: Hi, my name is Sara Malen.
5 I'm a Chapman graduate. I was engaged to one of the
6 top NSA gentlemen in the United States.

7 The history of your company -- gosh
8 back when Robert Barrons [ph] bankrupted United
9 States. It was the Rothchilds that started your
10 company, okay. The Rothchilds purchased them for
11 pennies on the dollar. So it's about money, folks.
12 That's what it is. I mean, you guys do what you can.
13 You work for the company. You know, your hands are
14 tied. You know, you're going to say okay, I need to
15 keep my job. I need to pay the kids, you know, do
16 what it takes.

17 But bottom line is, we got to look at
18 this -- I've talked to Royal scholars. I've talked to
19 MIT scientists. They have technology that they can
20 make like glass beads of this technology -- of this
21 waste. You know, we have two repositories that are
22 essentially burning, one in New Mexico and one in St.
23 Louis, Missouri. We don't want that. We're going to
24 store it there for how long.

25 You know, it's all about money. So

1 it's a monies game. I mean, and it's a life and death
2 thing because, you know what, you can kill a lot of
3 people and save a lot of money or you can do the right
4 thing and have a happy environment.

5 And since you all family lives here,
6 mine does, your all, you know, let's put things aside.
7 It's a money game, you know. I had my children, I had
8 a set of twins, and I lived up in Pasadena, San
9 Marino, and I had a Mommy and Me class, and I met a
10 gentleman, he was an engineer at San Onofre. And he
11 said, Sara -- he had these bottled glasses. He was
12 just the biggest nerd this side of the Mississippi,
13 but he was adorable. And he said, Sara, if this is
14 not in the LA Times, I'll probably end up dead.

15 But he was telling me they were taking
16 the waste and mixing it up with cement and putting it
17 in public places. So that's why four in one here in
18 Orange County versus seven to one getting cancer up in
19 LA. So bottom line is, it's a monies game, folks.
20 Wake up. You know, it's a death cult. So if we can't
21 get these companies to do the right thing, we should
22 make them public utilities and scoot them out.

23 MR. VICTOR: Thank you for your
24 comment. Dara Gale and then Florina Mosbalm [ph].
25 Dara Gale, the floor is yours.

1 MS. GALE: Hi, thank you. I'm having a
2 really hard time with the concept of defense-in-depth.
3 It really seems like an oxymoron. Defense-in-depth on
4 the beach. I cannot wrap my head around that. Dry
5 cask storage on the beach. Sand moves. The ocean
6 moves, and concrete deteriorates with salt water. And
7 then we add to that our high level of earthquake
8 vulnerability and the arctic and the antarctic
9 glaciers melting.

10 TEPCO didn't think about the fact that
11 they would have an earthquake and a tsunami at the
12 same time. You know, we could still have that
13 problem, too. It doesn't matter, as I learned at the
14 NRC meeting the other night. It doesn't matter how
15 carefully and lovingly and slowly we take these
16 canisters and put them into a temporary concrete tomb,
17 they're still on the beach, and we have no hot cell.
18 Why don't we demand a hot cell? Why can't we have a
19 hot cell?

20 Safety in dry storage only makes sense
21 if it's in thick monitorable [ph] canisters and it's
22 not on the beach. Thank you.

23 MR. VICTOR: Thank you, very much for
24 your questions and comments.

25 (Applause.)

1 MR. VICTOR: Florina Mosbalm and then
2 Judy Jones.

3 MS. MOSBALM: Hello, I am Florina
4 Mosbalm. I am a realtor here for 13 years, and I have
5 an automations degree, master's degree in Romania. I
6 was interested in the nuclear facility back there.
7 And also I am a survivor of the Chernobyl. So all of
8 this topic is very emotional for me more than others.

9 So questions, there is five percent
10 more or less that something can happen with one of the
11 canisters. Question, will others go off with this.
12 What will happen in that plan B? What emergency plans
13 are for the community? How will be all informed,
14 alarmed, evacuation plans, would we have to leave or
15 do we have to stay? I informed few of my contacts
16 about that app with emergency updates. I don't know
17 why the sirens have been silenced. It makes no sense
18 to me exactly in the moment when we transfer the
19 canisters.

20 And the number three is about the
21 insurance, the liability. So we know that no matter
22 how perfect the technology is, there is a risk, and
23 there is a risk that something can happen. And I'm
24 not talking about the 30 miles around. I'm talking --
25 I was about 700 miles from Chernobyl. Here we have

1 eight Chernobyl size waste. How -- what is going to
2 happen with our homes, the insurances? They have no
3 coverage. When we sell a home, we have to disclose
4 that it is in a certain miles from SONGS, from the
5 nuclear plant, but the insurance won't cover.

6 Five years after the Fukushima, the
7 Japanese homeowners were still paying their mortgage.
8 They were not helped. They were cautious. So
9 hopefully this will be covered. Thank you for letting
10 me speak.

11 MR. VICTOR: Thank you, very much for
12 your questions and comments. Judy Jones, and then the
13 last speaker of tonight will be Patricia Borshman
14 [ph]. Judy Jones, the floor is yours.

15 MS. JONES: Good evening panel, and
16 thank you for coming and listening to all of us and
17 all of these people. I know you're trying to learn
18 what's going on, and you're not all experts. So thank
19 you for your time and your effort.

20 I came tonight expecting to learn what
21 defense-in-depth meant and maybe to get some
22 perspective on what are the goals and the best
23 practices. So I was sort of surprised that what we
24 got instead was SCE explaining what they were doing
25 for defense-in-depth and not really what are they --

1 the best overreaching goals, and so I listened to this
2 as vendor selection.

3 I have done vendor selections myself in
4 IT, and I have never really seen a chart that looked
5 like this one. So my main question is, why on the
6 chart was no line across there where it said, yes,
7 yes, yes for everyone, and that's the one we selected.
8 And it didn't seem to be like anyone should be
9 selected. And that is my main question.

10 The other question would really be
11 about the criteria, who had some input into the
12 criteria, and why weren't more people asked, possibly
13 even in this audience, and maybe, you know, people on
14 the panel about what they thought were their most
15 important criteria. I hope you are really listening
16 to what the people say here, but I do thank you for
17 your time.

18 MR. VICTOR: Thank you for your
19 comment. Last, Patricia Borshman. Patricia Borshman,
20 the floor is yours. And then we're going to take
21 some -- I apologize, we're going to run over our
22 allotted three hours. We're going to take some time
23 to get as many of these questions answered tonight as
24 possible and all of them answered in writing if not
25 tonight. Patricia Borshman, the floor is yours.

1 MS. BORSHMAN: Thank you. I was not
2 able to be here on Tuesday night in person, but I did
3 observe the video. So I was -- it was a long meeting.
4 So that's all that needs to be said. Tonight, I am
5 here and am very glad to have an update on some of the
6 areas that were discussed about work that's being
7 done.

8 And, you know, I'm always anxious to
9 hear about what actions are being taken that are
10 proactive, that are putting, you know, Edison ahead of
11 the curve by anticipating needs and, you know,
12 responding and being proactive. You know, so I like
13 that approach, but what I'm hearing at, you know, -- I
14 ended up being disappointed because say for instance
15 at the portion of the presentation that pertained to
16 vendor selection for the strategic plan, that was kind
17 of a disappointment to me, and I share the concerns of
18 the previous speaker.

19 The charts that were provided, you
20 know, where you've got all these columns and criteria
21 and it really didn't make sense, you know, how this
22 vendor was selected.

23 So I'm also -- wanted to talk tonight
24 about issues about defense-in-depth and margins of
25 safety. That seems to be a common term that, you

1 know, we've heard. Stakeholders have heard, you know,
2 that being thrown around for decades. And we've seen
3 it incrementally reduced over the years. You know,
4 it's interesting, 'cause it's never been quantified.

5 I've never seen it, you know, measured.
6 I've never seen a baseline, you know, that defines
7 what it is. You know, how much is it to start with,
8 how much, you know, over time it is reduced little by
9 little. We've seen it reduced in, you know, here at
10 San Onofre incrementally, you know, many, many, on
11 many, many occasions, but it's never been, you know,
12 described or quantified to say what it was to start
13 with, what it is now. And I think that's a real
14 disturbing trend, and it's also an indication that the
15 analyses is no more than fantasy forecasting and fuzzy
16 math. Yeah, so it's disappointing, but thank you,
17 very much.

18 MR. VICTOR: Thank you, very much. As
19 is a custom, I'm going to hand the floor now to Jerry
20 and Dan who are going to put as many of these
21 questions to the other folks here. Let me just say it
22 to start. I think there -- a few, including the
23 Holtec inspection ring, which I'd like to carry to
24 Holtec itself. Having said that, I believe, I think,
25 the robots are doing the work now. So let me get that

1 question as part of our agenda for when we meet with
2 Chris and his colleagues on the 17th of September.

3 Dan and Jerry.

4 MR. STETSON: Okay. Thank you, very
5 much. If I might start, there are a couple of
6 questions with reference to Camp Pendleton as
7 potentially being an option for transferring the fuel.
8 Sam, welcome to the panel. Maybe before you say what
9 the position is, a little bit of background about
10 yourself.

11 MR. JAMMAL: Okay. Sure. I'm a
12 retired Marine. I served 30 years, and now I work for
13 the government in the Community Plans and Liaison
14 Office, and that's why I'm on this panel. I'm also an
15 infantry man by trade. I ran up the hills of Camp
16 Pendleton since I was about 22 years old in 1982, and
17 then retired in 2012.

18 So with that said, I believe most of
19 the panel members here and perhaps some of the public
20 are aware that the Marine Corp in a letter from
21 Lieutenant Joe Dana [ph] who's the deputy commandant
22 at the Marine Corps for installations. Wrote a letter
23 to the NRC dated 8 May 2018, basically asking their
24 support for the expeditious movement of spent fuel off
25 of the installation.

1 In addition, my predecessor, Tom Collin
2 [ph], in July of 2018, addressed the public with
3 regards to what the Marines do on Camp Pendleton and
4 why the base exists. Now, I'm not here to debate with
5 anybody unless you are an infantryman, you understand
6 the training process on whether we can move this or
7 not.

8 I think you can read from the letter
9 from General Dana that we all agree that spent fuel
10 needs to move off of its site, but nowhere else on
11 Camp Pendleton. The proposed location by Mr. Luts --
12 can I bring up the map, please? There you go.

13 As a Marine, I hate sitting down and
14 talking. So I'm going to try to stand up. All right.
15 If you look at this map, you can see only a few
16 layers. There are multiple other layers that we can
17 put on here. We can put habitat. We can put cultural
18 sites. So we have 125,000 acres, and if you're
19 driving I-5 south or north, it looks like it's open
20 space, ready to be taken or used for other things.

21 The purpose of this base is to do
22 training. It is one of two amphibious bases that the
23 Marine Corps has to basically conduct its training
24 exercises so when our Marines deploy forward, whether
25 to help somebody or whether to kill them, that they're

1 trained to do both. That's the mission of the base.

2 We have 85,000 people that live and
3 work on that base. The closest families to the ISFSI
4 right now are Marine families. So we do have some
5 concerns, and we want the best for everybody. But
6 moving the ISFSI anywhere else on Camp Pendleton is
7 not beneficial to us. It will impact our training.
8 The site chosen, and I know it might be random,
9 happens to be closest to the school of infantry where
10 17,000 Marines a year train and move. It's about a
11 thousand meters away from them. That would not be
12 acceptable.

13 So I think it's best by -- if I
14 summarize that we take all of our efforts and use them
15 to move it to a permanent or a temporary site
16 somewhere else. That would be the position of the
17 Marine Corps.

18 MR. VICTOR: Thank you. May we share
19 this map or would you have to kills us?

20 (Laughter.)

21 MR. KERN: We'll help on this one.

22 MR. JAMMAL: It's fine. I mean, we use
23 it for community engagement all the time for other
24 things.

25 MR. VICTOR: Thank you.

1 MR. JAMMAL: But I did not point out a
2 couple of things. You can look at all the Rs are
3 ranges. Those are live fire ranges. And the center
4 of the base is where all the artillery fires into.
5 So, again, it's not unencumbered 125,000 acres.

6 MR. VICTOR: Right. And if I can just
7 paraphrase what Tom Collin said previously, we train,
8 fire, and bomb --

9 MR. JAMMAL: Correct.

10 MR. VICTOR: -- I believe is more or
11 less what he said. Okay. Thank you.

12 MR. KERN: Just to stay with what Mr.
13 Luts' comments. I guess the direct question, and Doug
14 or Jerry or somebody can answer this. Did 30 or 31
15 get hung up on the ring?

16 MR. VICTOR: Did anything get hung
17 up --

18 MR. BAUDER: It was canister 29 that
19 became hung up on the ring.

20 MR. KERN: Yeah, but he asked --

21 MR. VICTOR: So the --

22 MR. KERN: The two new rotations with
23 the new system, did 30 or 31 gets hung up.

24 MR. BAUDER: Canisters 30 and 31 did
25 not get hung up on the ring.

1 MR. JAMMAL: Okay.

2 MR. STETSON: And just to follow up on
3 that. He also asked if those canisters were
4 inspected.

5 MR. BAUDER: Those meaning 30 and 31?

6 MR. STETSON: Correct.

7 MR. BAUDER: Those were not inspected
8 since they've been downloaded.

9 MR. KERN: Oh, I didn't get the
10 gentleman's name, but how much low-level radiation or
11 waste is on-site, the low level stuff?

12 MR. BAUDER: So I don't have a recent
13 number. We will get that number and get back to the
14 panel. I will tell you this. We've been shipping
15 low-level radioactive waste, and we've been shipping a
16 lot of it. And we have authorized that through what
17 we call authorized safe store activities with our main
18 contractor, SONGS Decommissioning Solutions.

19 So it's perfectly shippable. We have
20 agreements with repositories to take it, and when we
21 do and start the dismantlement process and the
22 decontamination process, we're going to ship a lot
23 more low-level radioactive waste. In fact, we're
24 going to ship all of it.

25 MR. KERN: Okay. If you can -- I guess

1 a two-part question. How much have you -- have on-
2 site and how much have you shipped? Maybe the next
3 CEP meeting we could just answer those questions.

4 MR. BAUDER: And we will answer that.
5 The question around how much we have on-site and how
6 much we can ship needs to be broken into parts because
7 we have some that's stored on-site in our storage
8 repositories, which are licensed. We also have low-
9 level radioactive waste in plant components. So as we
10 dismantle the plant, we're going to discover some
11 components that contain some waste. We'll segregate
12 that, we'll ship it, and the clean components will be
13 shipped elsewhere.

14 MR. VICTOR: Okay.

15 MR. STETSON: This was actually a
16 statement, but I'm going to make a question out of it.
17 And it's something that came up in our previous
18 meeting. And that is, is Southern California Edison
19 out of compliance with reference to a required
20 repacking of the spent fuel?

21 MR. BAUDER: I think the question was,
22 are we out of compliance with respect to being able to
23 remove a canister from its stored location. The
24 answer to that is no, we are in compliance. We can
25 extract any of our canisters from its stored location.

1 And we do, although it's very difficult to do, we
2 could put in play a series of actions that would
3 involve repackaging the canister using a spent fuel
4 pool. We could do that.

5 MR. STETSON: Okay.

6 MR. BAUDER: It's not been done before
7 with a sealed canister like ours. It would involve
8 some risk to our workers. It would not be an easy
9 evolution. It would not be even on the list of first,
10 second, or third things we would attempt to do, but we
11 are in compliance with the license.

12 MR. STETSON: Thank you.

13 MR. VICTOR: Just a quick -- the same
14 issue, Martha.

15 MS. MCNICHOLAS: Question, is that NRC
16 compliant procedure to take it out and put it back in
17 a spent fuel pool?

18 MR. BAUDER: No. The NRC certificate
19 of compliance involves being able to insert the loaded
20 canister into its repository location and then being
21 able to extract it because the certificate recognizes
22 a need to extract it so you can safely ship it
23 offsite.

24 MS. MCNICHOLAS: Right. But going back
25 into the pool is not --

1 MR. BAUDER: No, that's not in any part
2 of the NRC regulations.

3 MS. MCNICHOLAS: Okay, thank you.

4 MR. VICTOR: Can we get maybe between
5 you and NRC a short note that we can share with the
6 CEP and the community? 'Cause this has come up to the
7 NRC. This has come up here repeatedly, and it would
8 be great to have in plain English what the rules are
9 and what the kind of ideas are behind this.

10 MR. BAUDER: We will do that. There's
11 a lot of confusion around this because during the
12 campaign of moving fuel from wet to dry storage, we
13 comply totally with a certificate by being able to
14 extract canisters. And as I said, if we needed to, if
15 we absolutely had to, we could place a canister back
16 in the pool, although it would be high undesirable.

17 However, once we amend our license to
18 dry fuel storage only, there is no NRC requirement to
19 maintain a spent fuel pool. And, in fact, all
20 decommissioning sites in the country demolish and
21 appropriately handle their spent fuel pools. There is
22 not one who has maintained one because there's no
23 requirement by the NRC to do that under the
24 certificate.

25 MR. VICTOR: Okay, thank you, very

1 much.

2 MR. KERN: Well, and I guess the
3 followup is if -- 'cause one person asked the
4 question, has there ever been any significant
5 radiation leaking from a spent fuel island any place
6 in the nation?

7 MR. VICTOR: -- so this is the legal
8 standard.

9 MR. BAUDER: Yeah. If I understand the
10 question, has there been a leak on a spent fuel pool
11 island --

12 MR. KERN: Well, he had a -- yeah.
13 That somebody exposed to a spent fuel island got,
14 what, 100 --

15 MR. VICTOR: The question was whether
16 there has ever been an ISFSI anywhere, I guess in
17 North America to the relevant regulatory space that
18 has exceeded the 100 millirem at the plant boundary
19 standard.

20 MR. BAUDER: Yeah. I remember the
21 question. We would have to do some research on that
22 if we're going to look nationwide or broader than that
23 in accordance with our regulations it -- I will tell
24 you that's not ever happened at San Onofre, nor would
25 we expect it to happen.

1 MR. VICTOR: Okay. Thank you, very
2 much. Dan. Dan Stetson.

3 MR. STETSON: Sure.

4 MR. VICTOR: Just speak.

5 MR. STETSON: Doug, there's a
6 question -- were any of these canisters dented during
7 their offloading, and if so, you know, how significant
8 are they, how deep are those dents if there are any?

9 MR. BAUDER: I'm going to defer to
10 Jerry for that. I don't think there's any significant
11 dents.

12 MR. STEPHENSON: No, there were no
13 dents during handling on-site.

14 MR. VICTOR: Can I just follow up on
15 this issue of inspection? Donna raised a very good
16 point about what can you really see with a camera.
17 For example, at Koeberg, one of the things that they
18 learned is they couldn't detect using a standard dye
19 methods the cracks. So they had to develop other
20 methods, which they did.

21 What are you looking for in the camera?
22 What can you see? What requires other forms of --

23 MR. STEPHENSON: So generally camera
24 inspections are done as preliminary inspection to
25 identify areas of interest. As I said during the

1 presentation, we could adapt UT, which is the
2 volumetric, or any current testing, more likely UT to
3 the robot, which would be --

4 MR. VICTOR: Please remind everybody
5 what UT is.

6 MR. STEPHENSON: Ultrasonic testing.
7 Thank you. Yeah, ultrasonic testing, which is what
8 you used in the inspection industry to identify
9 subsurface flaws, which is -- like the ones that were
10 mentioned by a different speaker asking about what was
11 it, porosity and inclusions.

12 Okay, thanks. So we could adapt the
13 right -- when it's time to do that inspection, we can
14 adapt UT to the robot.

15 MR. VICTOR: Do you think that next
16 time we hear about defense-in-depth we could have a
17 little more granularity about the layers of what the
18 robots can see, what would need to be done next, so
19 that people could understand and kind of what the
20 layers of defense-in-depth really mean in this case
21 with regard to inspection would be helpful.

22 MR. STEPHENSON: Yeah, we can address
23 that.

24 MR. VICTOR: Thank you.

25 MR. BAUDER: I also would like to speak

1 about one thing. I think that line of questioning
2 went into potentially our inability to inspect welds
3 or inclusions in welds. So we will be able to, using
4 ultrasonic testing or any current processes to see
5 welds.

6 Now, I want to point out that all the
7 canisters received were radiographically tested at
8 Holtec's facility and at Areva or TN's facility before
9 sent to us. We have all the records, and we have all
10 the film from all the canisters. So if we see
11 anything, we can always go back and compare that to
12 the records and compare that to the film.

13 MR. VICTOR: And you know from that
14 inspection before shipment that there were no
15 inclusions in the welds when they left the factory.

16 MR. BAUDER: Yes.

17 MR. VICTOR: Okay, thank you. Again,
18 Jerry?

19 MR. KERN: I'll go -- the one lady
20 asked basically about three questions. You know, the
21 95 percent confidence level. She was concerned
22 there's a five percent chance of something happening.
23 So that may not be explained. I know statistics is
24 very hard to explain, but even if you explain that.
25 If there is something that happens, now, how would the

1 public be informed, and then why are the sirens
2 silent. So I don't know if that's --

3 MR. STEPHENSON: So the 95 percent
4 confidence is relative to a 62 thousandths deep
5 scratch. So there's a very slight chance that there
6 could be a scratch very slightly deeper than 62
7 thousandths. But, you know, as a line approaches
8 zero, it gets very, very close, you know,
9 acanthotically approaching. So the chance -- so even
10 at that last five percent is going to get you not very
11 much.

12 So there's no chance -- it doesn't say
13 there's a five percent chance of a failure. There's
14 not a five percent chance of a through-wall crack.
15 There's not a five percent chance of a very deep
16 crack. There's a five percent -- sorry, I said
17 crack -- scratch. There's a five percent chance of
18 something very slight greater than 62 thousandths.

19 MR. KERN: Okay. And so I guess now is
20 the -- since there's been changes, how would the
21 public be informed if there's an event?

22 MR. VICTOR: Do you want to comment on
23 this Donna?

24 MS. Boston: Doug, do you want to
25 address the sirens, and then I'll jump in on what we

1 do there.

2 MR. BAUDER: Okay, right. So our
3 sirens are retired as part of the normal NRC process
4 for amending our emergency plan. The amending of the
5 emergency plan goes in stages. That was the first
6 stage once we permanently shut down the plant and we
7 allowed some time to elapse.

8 The second stage will occur once all
9 the fuel is safely stored in dry fuel storage. Along
10 that pathway with the first stage and the first
11 amendment, there is no credible scenario when the
12 plant's permanently shut down and only fuel in the
13 spent fuel pools where you could have a scenario that
14 would cause the need for activation of the sirens.

15 We actually kept the sirens more than
16 two years longer than required as we worked with local
17 jurisdictions on do they want to keep sirens, do they
18 want us to remove then under a project, what do the
19 local jurisdictions desire. And we worked through the
20 inter-jurisdictional planning committee to do that.
21 And we have a project now to continue to retire the
22 sirens and remove them. In some cases, some will be
23 maintained, but not for the purpose of notification
24 under the emergency plan. Donna.

25 MR. VICTOR: And Donna, if you want to,

1 while you're talking, also talk about where the
2 jurisdictional planning committee is in its work?

3 MS. Boston: Sure. So to address the
4 sirens, the three cities have the bulk of the presence
5 of the sirens in their city. So each city was given
6 an option to manage and take over the maintenance and
7 operation of those sirens. Each of those cities is
8 making a determination of whether that was feasible
9 within their budget and working with Edison to do so.
10 There's only one unincorporated county siren, and
11 there are no residents within that county siren.

12 So we determine for the county, the one
13 lone county siren, that it was not feasible to
14 continue operation for that siren because we do have a
15 layered system of alert and warning for our
16 communities. So I hope that you've heard about the
17 Alert OC program. That is our mass notification
18 system. In an emergency we use Alert OC to call,
19 text, email as one of our layers of alert and warning.

20 Also within that we will use the
21 emergency alert system that goes over to your phone.
22 And we will use route alerting. We will use
23 helicopters. We will deploy every system of our
24 capability when there is an emergency. And you see
25 that when we have a wildland fire or other evacuation

1 piece going on in our communities.

2 So we test that. we also practice
3 joint decision making with those cities. So if
4 there's an emergency at San Onofre, we will convene a
5 decision maker's conference call and make joint
6 decisions not driven by the plant perspective, but
7 driven by our incident command perspective, and they
8 are trained to address the health and safety of our
9 community members. Those are the same people that
10 deploy for anything horrific that happens in our
11 community.

12 And they are trained to make those
13 public safety decisions, and they will look at our
14 data that we collect, look at the situation
15 assessment, and they will determine if we are to
16 evacuate, shelter in place, or et cetera with any
17 protective actions.

18 MR. VICTOR: Thank you. A couple more
19 minutes, and then we -- we're quite far over time. I
20 want to -- I need to wrap up. So let's take a couple
21 more questions.

22 MR. STETSON: Okay. Doug, as you know,
23 you're not required to do the radiation monitoring,
24 and I'm sure the public appreciates that that's going
25 to be in place. You're also not required to have done

1 the peening and also the canisters are thicker than
2 are required.

3 There's been a lot of questions and
4 comments about the sample size of eight. Even though
5 it's not something necessarily required, just in terms
6 of public confidence, do you think Southern California
7 Edison would be willing to consider a higher sampling
8 number than the eight?

9 MR. BAUDER: So maybe the first part
10 I'll address regarding the radiation monitoring. You
11 mentioned, Dan, we're not required. So we're not
12 required by any NRC rule to do that, but we did make a
13 commitment to the California State Lands Commission in
14 our hearing on March 21 to install realtime rad
15 monitoring for the dry fuel storage area and a
16 background monitor and produce that data so the public
17 could see that.

18 And we're on track with that project
19 plan. We're working on who would be able to receive
20 the data and independently verify it. And we
21 committed to have that done by the time we start our
22 decommissioning, our dismantlement work, our key work.
23 So, you know, I would say that's on track.

24 And then the second part was --

25 MR. STETSON: Really just in terms of

1 public confidence, would Southern California Edison be
2 willing to consider a higher sampling number than the
3 eight?

4 MR. BAUDER: Yeah. That's something we
5 discussed a lot. From our perspective, the data is
6 really good because we didn't just look and say, count
7 the canisters. We looked at each canister to qualify,
8 each rub mark, each point of incidental contact, each
9 thing we had a question about, and so that became a
10 data point.

11 And of the eight that we inspected, we
12 saw -- we found one that had virtually zero, you know,
13 marks or any indications on it versus the other seven.
14 So we looked at the entire data set. So it's not to
15 say in the future we won't decide to sample more.
16 It's not to say that.

17 In fact, we have a -- Lou mentioned
18 using the Corrective Action Program in that low
19 threshold. As we download canisters, if we see a
20 reason, if we have some sort of interference or some
21 sort of reason to do that, we're logging that, we're
22 putting it in the Corrective Action Program, and we
23 may go back and do our camera inspection on that
24 canister later on.

25 So we're not close-minded to it. I

1 know there's been a lot of discussion around the
2 sample size and the confidence interval and the
3 statistics. I'm sure we'll have more discussions
4 about that. But I just want to say we're not close-
5 minded to it.

6 MR. STETSON: Okay, thank you.

7 MR. KERN: And I guess the one last
8 question, somebody brought up the chart about the
9 different canisters and why you didn't select them,
10 but there wasn't anything that really clearly
11 delineated why you selected Holtec as the particular
12 vendor. I don't know.

13 MR. STEPHENSON: Okay. So the chart
14 that I showed was specifically designed to address
15 just the thick-walled canisters. And it listed all of
16 the different thick-walled casks that we considered
17 and showed that none of them met our criteria.

18 I went through the selection of the
19 vendors that we did select on a different slide where
20 I didn't have a chart, and I pointed out that we ended
21 up with three very qualified vendors, Holtec, Areva,
22 and NAC, and then the details of how we selected who
23 we selected I did not present those. That wouldn't be
24 appropriate.

25 MR. VICTOR: If there's a version of

1 this chart or multiple charts that would show the
2 fuller selection process so that the universe of
3 things that had yes everywhere, that might help.
4 Maybe that's a useful thing to include as part of this
5 refresh document that you're preparing for Congressman
6 Levin.

7 MR. STEPHENSON: Got it.

8 MR. VICTOR: Danny, any last things?

9 MR. STETSON: I think that's it.

10 MR. VICTOR: I want to raise one thing,
11 which is -- well two things very quickly. First is
12 some -- we had some important comments about the
13 concern about scratches and the relationship between
14 scratches and corrosion. It's my understanding that
15 that issue has been addressed in some detail in a
16 short document that you put together, summarizing
17 what's known about the scratch analysis and about the
18 self-healing process and the speed with which it self-
19 heals. Can you just remind us where we are with that
20 document? I think it's on SONGScommunity.com, and
21 we've circulated it to the CEP, but can you just
22 remind us where we are with that?

23 MR. STETSON: I don't know if that --

24 MR. BAUDER: We're going to have to
25 look at -- I think -- and we did attach a pretty solid

1 document to the website. So we'll verify that that is
2 there, David, and if it's not, we'll update it.

3 MR. VICTOR: I know this panel has
4 asked for that, and we've looked at this a lot. And
5 so there's a huge amount of information there, but I
6 think it's important to make sure the public can see
7 that information.

8 MR. BAUDER: Yeah.

9 MR. VICTOR: And why folks have
10 confidence in --

11 MR. BAUDER: Yeah, the functional
12 mechanism is there's a scratch that is created. As
13 long as the metal is warm, it quickly forms pacified
14 layer. There's some detail behind that, but we'll
15 look at that document.

16 Somebody just put it up here on the
17 screen.

18 MR. VICTOR: Yep. Okay, well, there
19 you go. There you go. Done. The last thing is, I
20 think there's a need at some point sooner rather than
21 later for some kind of a short summary on sea level
22 rise and the ISFSI.

23 We've heard a lot of comments about
24 this. We've heard a lot of comments about where the
25 system is with relation to mean sea level, high sea

1 level, ground water, questions around sea water
2 intrusion, resistance to salt water corrosion. So
3 there's a lot of moving parts there that we're not
4 going to get through tonight, 30 minutes overdue,
5 overschedule, but these are questions that keep coming
6 up, and I think we need to find a place where you can
7 put the answers and we can have a conversation about
8 that.

9 MR. BAUDER: Okay. We will do that.
10 That seems like a good candidate for the November 21
11 meeting to bundle that information. We'll also put it
12 on the website.

13 MR. VICTOR: That will be great.

14 MR. BAUDER: Right.

15 MR. VICTOR: And let's make sure we set
16 aside some time in November.

17 MR. BAUDER: Right.

18 MR. VICTOR: Other questions that were
19 not addressed to night, we will make sure are part of
20 the record and get addressed, but I will say, first of
21 all, thank you to everybody for staying longer than
22 the three hours.

23 I think tonight we've spent more time
24 answering questions than has been the norm. And I
25 think that's been really, really important. So we

1 should find some way to build that into the agenda
2 going forward. And any other comments and feedback
3 people have about this process, we'd really welcome
4 that.

5 We final set of comments. I want to
6 just put one slide up, which gives people a sense of
7 where we're headed next with meetings. The slide
8 after this, by the way, has a lot of acronyms on it.
9 So if you're thrilled about acronyms, that's your
10 slide.

11 But we're going to talk -- we're
12 working on scheduling the strategic plan and the state
13 of private consolidated storage for the last quarter,
14 21st of November is the current date for that. It is
15 currently -- there's a planning meeting that's being
16 scheduled right now for the extreme events workshop or
17 the dry fuel storage safety workshop. That's
18 currently scheduled to be not the planning meeting,
19 but the meeting itself to be held early in 2020.

20 I think there's a lot of interest in
21 holding that meeting earlier. I talked with Donna
22 Boston earlier today about getting the first
23 responders communities more heavily involved in that
24 planning process, 'cause, you know, we're already
25 thinking about beyond design basis events, and so we

1 should make sure that happens, and I will take that
2 back to Edison to make sure that you're organization
3 and other organizations are more heavily involved. I
4 really appreciate that.

5 That's all I wanted to talk about right
6 now. Doug, did you want to make any final comments?

7 MR. BAUDER: I just wanted to also
8 second that we do appreciate the questions. I think
9 they're solid. I was hoping we would get to some of
10 those detailed questions tonight. We did.

11 I want to -- the final thing I want to
12 leave you with is that I indicated earlier on that we
13 were going to share how we were doing with our fuel
14 offloading. It wasn't just going to be we come in
15 here, everything's going fine, here's the schedule.
16 It's not ever going to be that.

17 So if you look at our website now,
18 we've actually posed up some of the lessons learned
19 that Lou talked about, and we're going to continue to
20 do that. So you should expect that at future
21 meetings. You should expect to be able to ask us is
22 anything going on. Are there any issues around fuel
23 loading or anything else, and we're going to be --
24 look, I wrote an op-ed in early July to go after this,
25 and my message in the op-ed is the same as it is here.

1 We're going to be open about what's happening at the
2 station.

3 MR. VICTOR: Okay, thank you. Everyone
4 please -- thank you for your patience tonight, and
5 please drive home safely.

6 (Whereupon, the meeting concluded at
7 8:59 p.m.)

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I, LUCAS MAYEDA, the officer before whom the foregoing proceedings were taken, do hereby certify that any witness(es) in the foregoing proceedings, prior to testifying, were duly sworn; that the proceedings were recorded by me and thereafter reduced to typewriting by a qualified transcriptionist; that said digital audio recording of said proceedings are a true and accurate record to the best of my knowledge, skills, and ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this was taken; and, further, that I am not a relative or employee of any counsel or attorney employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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LORIE COOK

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