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2ND QUARTER COMMUNITY ENGAGEMENT PANEL
(REGULAR MEETING)

REPORTER'S TRANSCRIPT OF PROCEEDINGS

Oceanside, California

Wednesday, June 5, 2019

Reported by:
Heidi Hummel-Grant
CSR No. 12556
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2ND QUARTER COMMUNITY ENGAGEMENT PANEL
(REGULAR MEETING)

Transcript of Proceedings, taken at 1938
Avenida Del Oro, Oceanside, California, beginning at
5:39 p.m. and ending at 8:58 p.m., on Wednesday, June 5,
2019, before Heidi Hummel-Grant, Certified Shorthand
Reporter No. 12556.

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Oceanside, California

Wednesday, June 5, 2019, 5:39 p.m. - 8:58 p.m..

DR. VICTOR: Okay. Good evening. 05:39

My name is David Victor. I'm the chair of the Community Engagement panel. Thank you all for coming here and for braving the traffic.

As we get started here, I just want to remind everybody that we're approaching -- tomorrow is the anniversary of D-Day, a truly extraordinary event in American history. And I want to thank everybody who served in the military for your service. It's always valued by the Country and by all of us. 05:39

So as we get settled here, a reminder that if you need to evacuate the room, the main exits are there marked exit -- there's also an exit behind the curtain here -- but those are the main exits. You go out the way you came in and then back into the parking lot. 05:40

The Oceanside Police Department is here for your safety. In the event they to need to know about anything, please let them know. There are uniformed officers, two of them who are here. Thank you very much for your service. 05:40

Thank you also to the people of Oceanside for 05:40

1 hosting us again. 05:40

2 I want to mention we have three guest speakers

3 here tonight with us: Scott Morris, who's the regional

4 administrator for Region IV of the Nuclear Regulatory

5 Commission, down here to my left. 05:40

6 Next to Scott is Linda Howell, who's the deputy

7 director of the Division of Nuclear Materials Safety for

8 Region IV -- Ms. Howell, thank you for joining us --

9 that's the region that oversees the San Onofre Plant.

10 And Linda's division, in particular, is the division 05:41

11 that's been most centrally -- I'm not entirely sure why

12 the microphone system keeps generating all this

13 interference. I don't know if there's a way for us to

14 not make that happen, but -- maybe magic.

15 So in addition to Scott and Linda, 05:41

16 Jearl Strickland. Jearl is with Holtec, and is the

17 person on-site responsible for the fuel offloading

18 campaign. So Jearl, thank you very much for coming

19 here. Jearl will be presenting some slides about

20 Holtec's response to this and the path forward. 05:41

21 Scott and Linda will be talking about the NRC's

22 oversight and response and path forward.

23 There are community and SCE information booths

24 as you come in. And they'll be available during the

25 break tonight. 05:41

1 I want to remind everybody that the Community 05:41
2 Engagement Panel is not a decision-making body. This is
3 a two-way conduit between the communities that are
4 affected by the decommissioning of the San Onofre Plant
5 and the owners of that plant, in particular the 05:42
6 operator, Southern California Edison. And the idea is
7 to have a conduit that runs both dictations so that
8 Edison can understand what the communities are concerned
9 about, and also the communities can learn about what
10 Edison -- Edison and its subcontractors are doing. 05:42

11 And I think this -- the issue in front of us
12 tonight and about fuel transfer operations or known in
13 the industry as FTO -- because all simple ideas can
14 never escape an acronym. The topic tonight is one of
15 those areas where this two-way conduit is so vitally 05:42
16 important.

17 The meeting materials, the slide deck was shared
18 with the CEP in draft form last week and then yesterday
19 in its final form and then also posted on the website.
20 The agendas for tonight are on the -- are on your 05:42
21 chairs. The meeting is being -- as is always the
22 case -- being live streamed via the website.

23 Tonight we have several panelists -- panel
24 members who are out and have alternates with us.

25 So Debra Lewis. Debra Lewis is sitting in for 05:43

1 Paul Wyatt. 05:43

2 Kathy Ward is sitting in for Steve Schwartz.

3 Kathy, I'll talk more about that in just a moment.

4 Sam Jammal is sitting in for Tom Caughlan.

5 Thank you very much. 05:43

6 And then Doug Woodyard is sitting in for

7 Lisa Bartlett tonight.

8 So thank you very much for joining -- all four

9 of you for joining us tonight.

10 Let me remind everybody when you ask a 05:43

11 question -- both from the panel and then eventually from

12 the larger audience -- please state your name for those

13 watching on the live stream and also for the benefit our

14 court reporter, who's dutifully writing down -- or not

15 writing down, but typing everything that happens and 05:43

16 benefits from knowing who's talking.

17 I'll call out -- and Jerry Kern will also call

18 out -- various action items for the public -- for action

19 and for the public record.

20 It's a pretty big agenda tonight. A lot of 05:44

21 issues that we need to cover. I want to remind

22 everybody that during the public comment period -- let's

23 see whether -- no.

24 During the public comment period all comments

25 will be recorded. If you don't want to make a public 05:44

1 comment or you'd like to send us a written record of 05:44
2 your public comment, please send it to that email
3 address within five business days, and they'll become
4 part of the official record for the meeting.

5 As is always the case when we get public 05:44
6 comments, Dan and Jerry are going to write them down and
7 organize as much of a response tonight as possible, and
8 then also identify questions that need fuller responses.
9 And we'll talk a little bit more about the question and
10 answer process, that is getting much richer in content, 05:44
11 in just a little bit.

12 So I want to switch now to some general updates
13 from the community, and in particular recognize the sad
14 news of Mayor Steve Schwartz passing. Steve, as
15 everyone knows, was a member of this panel since 2006 05:45
16 and for the last year or so was elected to San Clemente
17 City Council in November 2016 and installed as mayor of
18 San Clemente in December of last year. He has a long
19 history as a public servant on Beaches, Park and
20 Recreation Commission. He's been a resident of 05:45
21 San Clemente for 30 years.

22 And would you please just join me for a moment
23 of silence to recognize Steve's contributions to our
24 community?

25 Kathy, if you could help us convey back to your 05:46

1 community our gratitude for Steve's service, we would be 05:46
2 enormously grateful for that.

3 We have a whole range of topics we'd like to
4 discuss that have come up over the last few meetings and
5 make sure that we're bringing the community up to date 05:46
6 on those. The first one concerns this ongoing effort by
7 us and by Edison to do a better job documenting
8 questions and responses. And for that, I'm going to the
9 floor over to Dan Stetson.

10 MR. STETSON: Thank you, David. 05:46

11 This has always been one of the things that
12 we've been striving to improve, and Edison has made some
13 significant steps with that recently.

14 I think all of you know that you're welcome to
15 come and provide public testimony here or to ask 05:46
16 questions, which are also, of course, welcome, to send
17 questions in advance, and Edison has now worked to do
18 quite a bit more in terms of working to address those
19 questions.

20 If you go on to the website, and if you -- for 05:46
21 instance, at our last meeting in March there is a new --
22 you can tab on that or click on that, and then it will
23 take you to an area that lists different questions, and
24 it will -- it goes in -- actually there's nine pages
25 that are devoted to answering some -- all of the 05:47

1 questions that were asked previously at the last meeting 05:47
2 that we were unable to answer directly during the
3 meeting. So you're welcome to go there. I really
4 encourage you to go there and check those questions.

5 We're hoping in the future to also take these 05:47
6 questions and put them all together in other areas so
7 you can see them as well. But the whole goal is to have
8 an area where all those questions can be addressed.

9 They've also got a new web page that is
10 dedicated to the canister operation. So you can go 05:47
11 there and check those out as well.

12 So we're going to continue to try to get as many
13 of your questions addressed as fully as possible and
14 have those on the website.

15 DR. VICTOR: Excellent. Thank you very much, Dan. 05:48

16 And I know from -- I personally have received
17 many questions from members of the public. And we will
18 try and get them all organized and answered. In
19 particular with focus on questions that continue to come
20 up and the answers to those questions. So additional 05:48
21 advice, members of the community, please be generous
22 with that advice.

23 Second, I want to give you an update on a number
24 of briefings involving local City Councils on issues
25 surrounding San Onofre and related topics. And for that 05:48

1 I'll turn -- give the floor to Jerry Kern. 05:48

2 MR. KERN: Thank you, David.

3 Yeah, I've been to several council -- meet with
4 several council members. I've also given a briefing to
5 the Oceanside City Council. And then Edison made a 05:48
6 presentation in San Clemente on June 18th.

7 And since we are a Community Engagement Panel,
8 we will come out and make that presentation to your
9 community group or your City Council.

10 I've been in discussion with Solana Beach and 05:48
11 with San Juan Capistrano -- we haven't set a date yet,
12 but we are having preliminary discussions about doing
13 that. So I -- I will come, and probably a

14 representative of Edison will come, and we can make that
15 presentation. Especially for those communities that 05:49
16 have closed circuit television or community access
17 channels, it's pretty beneficial for your communities to
18 hear about what's happened. So if you have any group or
19 if you think your City Council would like to hear that,
20 hear our presentation, just contact me through the 05:49
21 website, and I'll be glad to do it.

22 Thank you.

23 DR. VICTOR: Thank you very much.

24 I just want to mention that -- thank you, Jerry,
25 for taking the lead on that and also for the earlier 05:49

1 efforts to help brief local City Councils around the 05:49
2 seismic [sic] and certain documents sponsored by Edison,
3 because that work is enormously important.

4 So next are a series of Congressional briefings.
5 Several members of Congress have asked directly for 05:49
6 information about what's happening in the plant, notably
7 about the fuel transfer operations, FTO. So for that, I
8 want to turn the floor over to Tom Palmisano.

9 MR. PALMISANO: Thank you, David.

10 I just want to provide a brief update. 05:50

11 Last week on May 29th we had a briefing for
12 Representative Levin and staff members for
13 Representative Rouda and Peters and select members from
14 Representative Levin's task force. This was actually a
15 second meeting that we held. And this -- the focus of 05:50
16 this meeting was to specifically start discussing
17 questions about dry storage cask or canister technology.
18 We had, I think, a very productive meeting. We agreed
19 to some follow-up actions to continue the dialogue.

20 We're certainly encouraged by the interest in finding a 05:50
21 solution for long-term off-site storage of spent fuel,
22 and we're looking forward to that continued dialogue.

23 I've attached as an attachment to tonight's
24 package -- and I won't go over the slide -- but the
25 slide deck that we presented as part of the meeting. So 05:50

1 I just wanted to give that brief update. 05:50

2 DR. VICTOR: Thank you. Thank you very much.

3 Next I want to give the floor back to Dan to

4 talk about the Fuel Hearing later this week.

5 Dan? 05:51

6 MR. STETSON: Thank you.

7 Yes, this Friday Representative Harley Rouda is

8 going to be having a field meeting in Laguna Niguel.

9 And the purpose of that meeting -- I'll just read what

10 the purpose of it is from the press release: 05:51

11 "The hearing will examine the role of the

12 Nuclear Regulatory Commission in ensuring reactor safety

13 and the management and safe storage and disposal of

14 nuclear waste, safety risk related to nuclear storage,

15 and the challenges the Country faces in finding a 05:51

16 solution for the safe storage and disposal of the spent

17 nuclear fuel."

18 There's scheduled to be four speakers that will

19 testify as that. Mr. Scott Morris, who is here us

20 tonight, will also be testifying, along with Tom Isaacs, 05:51

21 myself and another gentleman.

22 DR. VICTOR: Thank you very much.

23 Next, very quickly, Dan and I have spoken at

24 three different industry-related events. We are focused

25 principally on what happens in San Onofre. But success 05:52

1 here depends on the industry overall being successful, 05:52
2 and the industry overall focusing on applying the best
3 of nuclear culture to the fuel offloading and the
4 decommissioning process. So we have an interest in the
5 rest of the industry getting more focused on these 05:52
6 issues as more plants are decommissioned and as we're in
7 the boat -- the same boat with lots of other plants. So
8 that's why we spent some time on this.

9 So maybe, Dan, you can talk briefly about the
10 first of these? 05:52

11 MR. STETSON: Sure. So I actually presented at the
12 first one in Virginia, primarily speaking to other
13 utilities about the importance of community engagement
14 and some of the issues that have come up in
15 establishing those, and working to set up the 05:52
16 guidelines for one of your own.

17 Immediately afterwards I went to Washington,
18 D.C. And I spent two days there meeting with different
19 representatives.

20 Two things I learned while -- through that 05:52
21 symposium itself. One of them which I knew, but I
22 didn't really understand it to the extent that it's
23 happening, and that is that many of the utilities are
24 being purchased along with their trust funds by other
25 companies to expedite the decommissioning process 05:53

1 themselves. Fortunately, that's not happening here with 05:53
2 SONGS, with Southern California Edison. They're
3 sticking to it. We're going to be through it with the
4 entire process with ourself.

5 The other one that I learned was actually how 05:53
6 much it is costing the American taxpayer by not -- by
7 not coming up with a solution to move the spent fuel.
8 And over the total -- it's approximately 35 -- over
9 \$35 billion, and it's costing the American taxpayer over
10 \$2.2 million a day as we don't come up with this 05:53
11 solution.

12 DR. VICTOR: All right. Thank you very much.

13 And that's a point you also make in your
14 testimony that you're giving later this week to
15 Representative Rouda and to others. So maybe let's be 05:53
16 sure to circulate that testimony to the entire Panel as
17 soon as it's ready. I know there's an attachment with
18 data on the cost. So I -- I'm interested in moving
19 spent fuel out of here because that's the right thing to
20 do, but if it also saves the American taxpayer a lot of 05:54
21 money of top of it, that's even better.

22 I've spoken over the last month or so to events
23 organized by the Nuclear Energy Institute, one
24 particularly focused on used fuel management, helping to
25 bring people up to speed on what we're doing here at 05:54

1 San Onofre. There's a lot of attention to what's 05:54
2 happened at San Onofre and to the Community Engagement
3 Panel experience. And that was particularly an
4 opportunity to talk about that.

5 Yesterday I was in Washington speaking at 05:54
6 their -- NEI's annual energy assembly, mostly about
7 climate change and nuclear power. That's not an issue
8 that's relevant for us as plaintiffs close [sic]. But
9 it is an issue that's becoming relevant to the rest of
10 country as people try to get serious about reducing 05:54
11 emissions and looking at all the technological options.

12 I'll just emphasize something that Dan said in
13 passing, which is it's crucial that we spend time on
14 these issues, including Capitol Hill, because the
15 ultimate solutions here involve moving the spent fuel 05:55
16 out of the San Onofre plant, and that requires a change
17 in Federal law.

18 I want to give a little summary of what you
19 should expect to see in the coming week to several
20 months. Most of the action's going to be in the House 05:55
21 of Representatives right now. It follows both
22 authorization and appropriation. So authorization is
23 about changing law to tell the Government to do things
24 that are different. And appropriations is about getting
25 money for that. 05:55

1 There will be hearings, I believe, next week on 05:55
2 nuclear waste policy amendments and other legislation,
3 including legislation that involves what order spent
4 fuel might be moved from. I don't expect anything to
5 move on that very quickly, the authorization process, 05:55
6 but it's crucially important politically because the
7 longer there isn't authorization activity inside the
8 House, the harder it is to get money for interim
9 storage. And that's really what we care about, which is
10 continuing, at least, the pilot programs, where 05:56
11 Government can spend resources on making interim storage
12 a reality. Storage is these facilities that are moving
13 through the licensing process in New Mexico and in
14 West Texas. And the more of those sites that happen,
15 the better off we are, because it gives us more options 05:56
16 in response to sending the spent fuel to other
17 locations.

18 The Senate appropriations process was supposed
19 to be underway right now. You may have read in the
20 newspaper not everybody gets along in Washington these 05:56
21 days, and that includes the Senate and the House. So
22 they're wrangling over a broad budget deal, and until
23 they sort that out, the appropriations process in the
24 Senate won't be able do the same kinds of things that we
25 expect to see from the appropriations process in the 05:56

1 House. 05:56

2 I think overall this is good news. It's as good
3 a news as we can expect, that we are starting to see
4 serious appropriations activities in both the House and
5 in the Senate and may well get it done this year in 05:57
6 terms of appropriations.

7 I want to pause for just a moment because that's
8 the last general update. I want to see if there are any
9 other members of the panel that have things they would
10 like to update the community on. 05:57

11 Ted Quinn?

12 MR. MR. QUINN: Yeah, I'd like to update on the
13 Department of Energy. The DEO, you know, does, within
14 their current charter, a number of things to help in
15 the process of moving spent fuel. One of them is to 05:57
16 qualify the railcar. And we've received reports that
17 the CPB4 involved a qualification of a railcar, which
18 will move our qualified canisters. They also have done
19 a transportation report now this year for five sites
20 within the United States. Those are Crystal River, 05:57
21 Rancho Seco, La Crosse, Zion and Yankee Rowe. Those
22 are fully scoped deep dives into all of the items that
23 need to be addressed in moving spent fuel to a
24 Federally authorized facility.

25 Now, our San Onofre site was not on that list. 05:58

1 So we've asked DOE next year could they put it on their 05:58
2 budget so they could do a deep dive into all of the
3 detailed -- now I want to say independent of where it
4 goes, there's many activities, as you're well aware,
5 that need to be addressed. 05:58

6 DR. VICTOR: Excellent. Thank you very much.

7 I think we are overdue in getting ready to --
8 doing the prep work needed to -- to be able to send
9 spent fuel to an interim storage site. What we've
10 learned -- and I've reported on this and others have 05:58
11 reported on this many times -- what we've learned is it
12 takes four or five years of serious effort. And we've
13 asked the California Energy Commission to help get that
14 process started. So far we've heard crickets from them.
15 They are in the middle of a big change, because the 05:58
16 leadership there has changed, and the leadership is also
17 focused on other things like wildfires. But I'll take
18 it as an action item right after this meeting to get
19 back to them with our request again, that the California
20 Energy Commission help jump start the process here in 05:58
21 California.

22 I'll mention one other thing before I finish
23 this element of the update, which is there is a Federal
24 solution for moving the spent fuel, which involves
25 railcars. A model railcar is being developed and tested 05:59

1 right now. And there are also private solutions that 05:59
2 would use the same railcars or other transportation
3 technologies and with private resources move spent fuel
4 to interim storage sites, if there's a way to move it
5 there. 05:59

6 And I think it's encouraging that just last
7 month on May 21st, the NEI organized a tabletop exercise
8 at Prairie Island. The Prairie Island Nuclear Plant
9 involved one commissioner of the Nuclear Regulatory
10 Commission where they worked through in some detail what 05:59
11 would be involved to have a private movement of spent
12 fuel from a place like Prairie Island -- eventually a
13 place like San Onofre -- to an interim storage site.

14 So the stars are starting to line up, bits and
15 pieces here and there. We have got to keep that process 05:59
16 going. We've got to make sure that we are ready here in
17 California to -- to transfer fuel the moment that
18 opportunity arises.

19 Martha McNicholas?

20 MS. MCNICHOLAS: Do you have a date -- or excuse me, 06:00
21 a place for the House Committee on Oversight Reform
22 that Representative Rouda is chairing?

23 MR. STETSON: That describes it.

24 MS. MCNICHOLAS: I know, but where?

25 DR. VICTOR: Does anyone know off the top of their 06:00

1 head? 06:00

2 MS. MCNICHOLAS: I hear it was in the Chet Holifield
3 Federal Building, but that's a big building.

4 MR. STETSON: Yes, it is the Chet Holifield Federal
5 Building in Laguna Niguel. It is at 11:30 a.m. 06:00

6 MS. MCNICHOLAS: Okay.
7 So somewhere in that building. Hopefully
8 there'll be signage.

9 MR. STETSON: Yes. I'm sorry, I've never been there
10 myself so -- 06:00

11 MS. MCNICHOLAS: It's a huge campus. So I just --

12 MR. STETSON: Well, thanks. I'll be sure to get
13 there early.

14 MS. MCNICHOLAS: Okay.

15 DR. VICTOR: Anything else? 06:00

16 MS. MAGDA: And that's open to the public?

17 DR. VICTOR: Is that open to the public?

18 MR. STETSON: Yes. My understanding is it's open to
19 the public, and it's also going to be live streamed.
20 So they have issued a press release. And if you click 06:01
21 on that link, you can see it from your computer.

22 DR. VICTOR: Thank you very much.
23 Anything else? Okay.

24 We're going to move to the native segments of
25 today's meeting. 06:01

1 First give the floor to Tom Palmisano to talk 06:01
2 very briefly about a few key updates.

3 And then, of course, we're going to focus mainly
4 on the fuel transfer operations.

5 Tom, the floor is yours. 06:01

6 MR. PALMISANO: Okay. Thank you.

7 This portion, as David said, is some updates on
8 key some topics. So I'm going to be fairly brief,
9 because we really want to get into the discussion of the
10 fuel transfer operation preparation and status. But 06:01
11 these are important. So with that, let me just go right
12 to this slide.

13 We continue doing quite a bit of work on topics
14 of interest. So, first of all, the expert team. If you
15 remember, we committed in a lawsuit settlement to 06:01
16 develop a strategic plan to identify actions that SCE
17 could take to help facilitate the development of
18 off-site storage for SONGS spent fuel. And as part of
19 that commitment, we also agreed to select an expert team
20 of industry experts to advise us on what should be 06:02
21 considered in that plan and feasibility. So the plan
22 continues to work. We're developing the strategic plan.
23 We're selecting a contractor who will actually do the
24 heavy lifting of developing and writing the plan in
25 conjunction with the expert team. And we look forward 06:02

1 in the future of discussing that more with the Community 06:02
2 Engagement Panel. It's not ripe yet for that, but at
3 some point it will be, to come and start talking more
4 about that.

5 DR. VICTOR: I just want to mention that I've -- 06:02
6 we're going to change our mic system next time.

7 I just want to mention that I've been in regular
8 contact with Tom Isaacs, and I know we are very keen,
9 when the time is right, to hear from him, his
10 colleagues, about what the expert team has been doing. 06:02

11 MR. PALMISANO: And Tom is the chair of the experts
12 team, a long-time DOE person with a lot of experience
13 in storage and disposal of spent fuel. Okay.

14 Next topic -- and I'm going to give a little
15 more on the next page -- we hit a significant milestone. 06:03

16 So canister licensing or relicensing and aging
17 management. As we talked a little bit before, the
18 canisters are initially licensed by the NRC for storage
19 for 20 years. And they go through a license renewal
20 process -- and this is going on across the country, 06:03
21 where they're reviewed and then relicensed for a period
22 of 40 years.

23 So on our first system, which is the AREVA
24 system, the horizontal system, that is approaching the
25 20-year point. The license is actually held by a 06:03

1 company called Orano, which is a successor to AREVA 06:03
2 Transnuclear, and they have now recently filed to renew
3 the license for our system for 40 years. So I'm going
4 to show you a table on the next page -- it gives a
5 little more detail -- but this is an important 06:03
6 milestone; we want to make sure the Panel and public are
7 well aware of it.

8 Likewise, we're writing a white paper that we'll
9 review with the CEP and then post on the website that
10 gives the background, if you will, on canister 06:04
11 relicensing and the aging management programs -- the
12 acronym is APS -- that will go into place for the AREVA
13 system.

14 And -- do you have a question?

15 MR. STETSON: Yes, I do, Tom. 06:04

16 So is that for an additional 40 years --

17 MR. PALMISANO: Yes.

18 MR. STETSON: -- on top of the 20 --

19 MR. PALMISANO: Yeah.

20 MR. STETSON: -- so it would be for a total of 06:04
21 60 years?

22 MR. PALMISANO: That will be for an additional
23 40 years on top of the original 20-year license life
24 for the system. And that's a standard mechanism that
25 is used for reactors as well as dry cask storage. 06:04

1 For example, reactors are licensed for 40 years. 06:04
2 Many reactors in the country are licensed for an
3 additional 20. Dry cask, it was an initial 20 years.
4 Now they're relicensed for 40 years. So that's exactly
5 where it is, for a total of 60 years. 06:04

6 MR. STETSON: Just out of curiosity, I mean, they
7 did it originally for 20, and now they're doing --
8 extending it for twice that?

9 MR. PALMISANO: Yes, yeah.

10 MR. STETSON: Is it because of -- they have a higher 06:04
11 confidence in the --

12 MR. PALMISANO: Yeah. I -- I think the reality is
13 the canister and the dry fuel storage systems -- mostly
14 canisters in this country, some thick-walled gas --
15 there's a lot of experience now, there's much more 06:05
16 research that has been done, and there's a confidence
17 level that 40 years is appropriate with the aging
18 management program in place, which gets you into more
19 maintenance and surveillance activities that occur with
20 the system. 06:05

21 DR. VICTOR: Debra Lewis?

22 MS. LEWIS: So I'm curious. Why was it licensed for
23 only 20 years in the first place versus 60?

24 MR. PALMISANO: That -- that I'll have to, you know,
25 bring that answer back from the NRC. You know, that 06:05

1 was set up Federal reg -- by the NRC's rules for the 06:05
2 initial licensing. I don't have a ready answer as to
3 why 20 initially instead of 40. But we can get that
4 answer.

5 MS. LEWIS: Yeah, I think that's important because I 06:05
6 think it leaves the impression that, you know, this is
7 only licensed for 20 years, and, you know, this stuff
8 has this half-life forever. So I think that could
9 help.

10 MR. PALMISANO: Well, in -- in a future meeting, 06:06
11 when we have more time to delve into aging management,
12 we'll differentiate design and service life from the
13 license life.

14 MS. LEWIS: Thank you.

15 MR. PALMISANO: The assistant radiation monitoring. 06:06
16 So dry cask storage. We've committed to putting a
17 permanent radiation monitoring system around the dry
18 cask storage facility. That will be in place prior to
19 the start of decommissioning activities. We've made
20 that commitment in the Environmental Impact Report of 06:06

21 the State Lands Commission. The engineering is
22 actively underway. We're well on track to meeting that
23 commitment. And importantly, as far as public
24 reporting, we're working to set up agreements to stream
25 the data live to appropriate off-site agencies who will 06:06

1 then review the data and disseminate the data 06:06
2 publically. So we're in good shape on that commitment
3 at this point. And we'll look to talk about that
4 further as we get closer to completing the system and
5 the start of the decontamination and dismantling phase. 06:06

6 The other last item on this page, we have not
7 lost track as a utility or a Panel of the extreme events
8 workshop because of the need for us to focus on fuel
9 transfer. That had been slowed down a bit, but that is
10 still on our list for the third quarter. We'll be 06:07
11 working with the CEP and the interested parties on the
12 appropriate way to handle that workshop.

13 DR. VICTOR: I just want to mention that we started
14 the process last fall. Understandably, the bandwidth
15 to do that workshop, while everyone was focused on 06:07
16 learning what happened last August, fixing it, making
17 sure the fixes are appropriate, that's been the focus,
18 as I understand it, of your organization. So we need
19 to get back -- once the fuel transfer operations are
20 back underway, we need to get on this topic. I hope we 06:07
21 can do it in the third quarter. We need to do it
22 properly. So we need to do it with proper preparation
23 and not rush an event that's not properly organized.
24 But I hope we can get it done in the third quarter.

25 MR. PALMISANO: Right. Thank you. 06:07

1 Let me go on to the next slide. So this is a 06:07
2 little more detailed because of the recent filing to
3 renew the license on the AREVA Transnuclear system. I
4 wanted to give you a little more detail. So what I'm
5 showing you here, I've got both our systems, so the 06:08
6 right column is the AREVA Transnuclear system, which
7 went into service around 2003 at SONGS, and on the left
8 is the Holtec UMAX system, which is a newer system that
9 we're in the process of offloading fuel to.

10 Probably -- just to give you a feel -- so 06:08
11 license renewal. The AREVA system, it was submitted on
12 May 22d, 2019. This is a publically available submittal
13 to the NRC. The vendor actually submits and goes
14 through the process. We are actually very involved with
15 them, of course. 06:08

16 The Holtec system was licensed in 2015. So it
17 will come up for its renewal in 2035.

18 Now, typically what the NRC requires at the
19 renewal time frame is you develop an aging management
20 plan which provides detail on how the canister system 06:08
21 and its associated structures will continue to be
22 maintained and monitored, inspected over the
23 remaining -- you know, the future life of the system.
24 For the first 20 years there's some basic requirements.
25 The canister inspections really start with the license 06:09

1 renewal period. 06:09

2 So this system that we use is in use at other

3 sites, a sister system, very similar, just not at

4 seismically designed. And they've already been renewed

5 at several sites, including the Rancho Seco retired 06:09

6 nuclear plant outside Sacramento. So there was good

7 experience with the requirements for our AREVA system

8 that is all going into the renewal process.

9 The aging management place [sic] will be in

10 place fourth quarter 2021. Importantly for the AREVA 06:09

11 system, we will do the first set of inspections -- the

12 NRC expects us to do baseline inspections on those

13 canisters. And that right now is targeted for the

14 fourth quarter of 2021.

15 On the Holtec side -- I talked last meeting 06:10

16 about inspecting --

17 DR. VICTOR: Kathy Ward?

18 MS. WARD: Thank you very much.

19 Really quick, Tom, I just wanted to talk to you

20 about the radiation monitoring that you talked about -- 06:10

21 MR. PALMISANO: Sure.

22 MS. WARD: -- before.

23 I believe someone's going to come and speak to

24 us, our City Council, on June 19th?

25 MR. PALMISANO: Yeah, June 18th, I believe. 06:10

1 MS. WARD: 18th. Okay. 06:10

2 That monitoring is very important to our City.

3 So I'd like to hear more about the timing -- you said

4 it's in the EIR -- but about how long that's going to

5 take and -- for it to be actual public information. 06:10

6 Because you said it's going to go to an appropriate

7 agency and then they're going to work on making it

8 public.

9 MR. PALMISANO: Right.

10 MS. WARD: So I'd like to hear that process, if you 06:10

11 have that.

12 MR. PALMISANO: Yeah. And on the 18th I'll be glad

13 to go into more detail on it. I -- I don't have all

14 the detail on a slide tonight.

15 Basically, physically the system will be in 06:10

16 place and operating during the -- at the start of the

17 D&D period, the decontamination and dismantlement.

18 That, let's say, is a -- nominally a year out. The data

19 reporting will be ready at that point. We don't yet

20 have agreements from the appropriate agencies. We're 06:11

21 working on that.

22 So I'll be glad that -- on June 18th we'll lay

23 this out in a bit more detail for you.

24 MS. WARD: I appreciate that.

25 MR. PALMISANO: And we should tell you we have 06:11

1 radiation monitoring around the system now that we use 06:11
2 for our purposes that is active.

3 DR. VICTOR: Okay. Jim Desmond?

4 MR. DESMOND: Yes, thank you, Mr. Chair.

5 I've got a question on the canisters themselves. 06:11
6 If we -- if we got the 40-year extension on the
7 canisters, since it's been, you know, since the '60s or,
8 whatever, looking for a site -- and it's encouraging to
9 hear there are some temporary potential sites -- what
10 happens if we're -- what's the plan to replace the 06:11
11 canisters once the life ends and we're still stuck with
12 them?

13 MR. PALMISANO: Well, you know, obviously there's a
14 lot that has to happen over the next several years and
15 several decades to get an interim site built, fuel 06:11
16 shipped to it. In the event fuel continues to remain
17 on-site, we and the other utilities are going to have
18 to prepare for the longer term. Realize DOE is
19 responsible under the Nuclear Waste Policy Act. So we
20 would certainly expect some DOE involvement. 06:12
21 I'll -- glad in a future meeting to come in and
22 talk about the NRC in the last couple of years issued a
23 generic Environmental Impact Statement on continued
24 storage of fuel on sites in periods 60 years, a hundred
25 years and indefinitely. There's some very good material 06:12

1 about what would be required. 06:12

2 MR. DESMOND: So it sounds like if it has to go
3 beyond the 60 years, I have -- I don't know -- have
4 some confidence we might find an interim site. But if
5 it goes beyond the 60 years or the life of the nuclear, 06:12
6 we're going to have to change out and put it in a
7 different canister? Is that it?

8 MR. PALMISANO: Potentially.

9 MR. DESMOND: I guess even if it is moved to an
10 interim site or another site, you know, Texas or 06:12
11 wherever it is, who's responsible, then, for that
12 canister when that -- the life goes up -- let's say we
13 move it in 20 years, and it's only got 20 years left on
14 it, who's responsible for the canister at that point in
15 time? 06:13

16 MR. PALMISANO: So I'm going to be real quick
17 because I'm sensitive on time here. There's a lot to
18 come.

19 So very quickly, under the Nuclear Waste Policy
20 Act, the DOE's responsible to take fuel from the site, 06:13
21 dispose of it in a permanent repository. Okay? They're
22 default on that commitment. Okay?

23 If this goes to an interim site, the open
24 questions are: Is this a site that DOE takes title of
25 the fuel and contracts with a private company? Or the 06:13

1 private company takes title to the fuel? Either way, 06:13
2 from a utility standpoint, we would expect the
3 arrangement has to be made that DOE or the private
4 company would take that responsibility.

5 MR. DESMOND: But if that still hasn't happened yet, 06:13
6 and we don't have an interim --

7 MR. PALMISANO: The sites are just undergoing the
8 initial licensing with the NRC. So that -- that
9 discussion's several years out.

10 MR. DESMOND: Okay. 06:13

11 MR. PALMISANO: Okay?

12 MR. DESMOND: Thank you.

13 DR. VICTOR: Let me just mention this: Essentially
14 all of the -- do you want me to comment, or do you want
15 to -- I mean, I can do either one. 06:14

16 MR. MORRIS: The -- the fact is is the matter of
17 interim storage is under current review right now by
18 the licensing folks. There's actually been a safety
19 and licensing board hearing on both -- on one
20 application and another -- I think there's a hearing 06:14
21 set for next month, I believe. So, you know, it's --
22 it's an active conversation now. There have been
23 contentions filed. It's in a hearing review appeal
24 process. So it's -- there's no definitive outcome at
25 this point. 06:14

1 DR. VICTOR: Let me just mention as well that this 06:14
2 is one of the reasons for having a clean change in
3 Federal law with clean language associated with
4 appropriations to clarify exactly who holds title to
5 the fuel. Because when it leaves the plant, you 06:14
6 can't -- totally lack of respect [sic] for the
7 individual utilities to continue to hold title while
8 the fuel is sitting in New Mexico or Texas, hopefully
9 any number of other --

10 MR. MORRIS: I know, but you're thinking rationally. 06:15

11 DR. VICTOR: Okay. We should let him go on.

12 But I would say that there's an enormous amount
13 of tension in backing this issue on the Federal side
14 precisely because people want to avoid re-creating
15 another limbo that was already created by the original 06:15
16 concept in the Nuclear Waste Policy Act of 1982, which
17 was the Federal government would take title to the fuel,
18 spent fuel, and move it to some permanent site, which
19 ended up being only one permanent site, Yucca Mountain.
20 So the idea is to be smart about not replicating that 06:15
21 error. I am sure they'll create other errors, but not
22 replicate that error.

23 And then, Tom, continue on.

24 MR. PALMISANO: Yeah, the first step in all this is
25 completing the license and reviews that are in progress 06:15

1 through the NRC. Okay. 06:15

2 Very quickly, canister -- I want to talk to you
3 about the aging management plan and the inspection
4 maintenance program for the Holtec system.

5 The aging management program for AREVA will be 06:15
6 required at the end of a 20-year period prior to
7 entering the renewal period. That's on track.

8 The inspection maintenance program we've
9 committed to the Coastal Commission and then accelerated
10 will have a similar program in place for the Holtec 06:16
11 system in October 2020. So we are not going to wait
12 20 years for the Holtec system. We've had a lot of
13 important feedback from the public and the CEP. So
14 that's being accelerated. We've actually done eight
15 inspections on the Holtec system. And I'm going to talk 06:16
16 about those in a little depth in a minute.

17 Baseline inspections in a little over two years
18 for the AREVA.

19 And remediation on mitigation. That's
20 important. We're going to have that as part of the 06:16
21 inspection maintenance program, because not only do we
22 need to inspect these, we've heard it loud and clear we
23 need to be ready. What are we going to do if we see an
24 indication? We're actively working on several
25 possibilities: Robotic weld repair, encapsulation -- so 06:16

1 you kind of think of a Russian doll, take a canister, 06:16
2 put it inside a sleeve that isolates it from the
3 environment, or putting a canister in a transportation
4 storage cask. So that's not tonight's topic. We'll
5 look to spend much more time on this in the future. But 06:17
6 given that the -- we've recently had AREVA file for
7 their system, wanted to give you an update.

8 Real quick --

9 DR. VICTOR: I, for one, would love to have a
10 meeting on that topic. 06:17

11 MR. PALMISANO: Right. It's a rich topic and we --
12 we are really, truly leading the industry, working with
13 Efry [sic], the vendors and others. So we would look
14 forward to coming in and talking about that in depth.

15 Real quickly, robot on the left we're using on 06:17
16 the Holtec system. This is an inspection ring. That's
17 actually a cross-section of the canister that is drawn
18 through the ring for the horizontal system. This
19 inspection ring exists, and it's undergoing the final
20 development qualification that we can use if we need to. 06:17

21 With that -- this is important. So
22 environmental permitting. We've talked before in March,
23 the State Lands Commission approved the final
24 Environmental Impact Report. We had filed our Coastal
25 Development Permit Application with the Coastal 06:17

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1 Commission. And they have a meeting in San Diego next 06:18
2 week, and we were on the agenda for June 12th. This is
3 breaking news. The Coastal Commission has just informed
4 us in the last 24 hours we will moved off of the agenda
5 for the June meeting and then will be placed in a future 06:18
6 meeting, which will be in the vicinity of the site.
7 They feel they need more time to address some questions
8 they have received and prepare for the hearing. We
9 certainly understand that. We certainly accept that
10 decision. We're disappointed. We are truly ready for 06:18
11 the meeting and we're looking forward to next week's
12 meeting, and we will work with the Coastal Commission
13 staff to provide them any further information. And
14 we'll look forward to a good meeting when they do
15 schedule. So I wanted everybody to hear that. 06:18

16 The last I checked this afternoon, the Coastal
17 Commission website had not been updated, but they've
18 told us we could release this information.

19 DR. VICTOR: Anything else for the general update?

20 UNKNOWN SPEAKER: The June 12th was canceled? 06:18

21 MR. PALMISANO: Yes, we are off the agenda for
22 June 12th.

23 DR. VICTOR: Yeah. Great. Thank you very much.

24 I want to move on to the fuel transfer
25 operations. 06:19

1 MR. PALMISANO: Okay. So fuel transfer operations. 06:19
2 Several of us are going to speak. I'll start off.
3 I'll turn it over to Jearl Strickland from Holtec, and
4 then Doug Bauder will talk about the paths forward.
5 So with this, we're going to cover significance 06:19
6 of scratches. We've done a lot of work on this, and I
7 did talk about this in the March 28th meeting, where we
8 had inspected three canisters. We've now resolved the
9 issue to our satisfaction.
10 Holtec will talk about their operational 06:19
11 enhancements similar to the enhancements that I talked
12 about in March.
13 And then Doug will talk about our oversight
14 improvements and the path forward.
15 And then the NRC speakers are scheduled. 06:19
16 With that, very quickly, so the issue here --
17 let me go back one -- the issue here is that downloading
18 the canister, the canister makes contact with the shield
19 ring and the seismic restraints as the canister travels
20 approximately 25 feet to the bottom of the storage 06:19
21 vault. Incidental contact is not unexpected in a
22 vertical system. In fact, I'll tell you incidental
23 contact occurs in horizontal systems, vertical systems
24 of all different designs. So contact is not unusual.
25 We had some unfortunate statements in the Holtec 06:20

1 final safety analysis report that indicated the 06:20
2 clearance was sufficient, contact would not occur. That
3 was an incorrect statement. Okay.

4 So given a contact occurs, you wind up with some
5 shallow wear marks or rub marks or scratches on the 06:20
6 outside of the canister. So the question then is: How
7 significant are they? Do they present a problem for
8 either confinement or the structural integrity aspect of
9 the canister? So we've done enough inspection work and
10 analytical work to resolve that and conclude we're 06:20
11 satisfied.

12 So let me talk first about how we inspect it.
13 And you saw this slide back in March. What you're
14 looking at is an actual loaded canister. We've taken
15 the heavy shield lid off the UMAX storage facility for 06:20
16 one of the canister locations. You see we have a crew
17 of vendors. GE provides the camera. That's actually a
18 robot sitting on a little shelf. Because of the
19 radiation fields, we work at a distance with remote
20 tooling. That robot is tilted down below the shield 06:21
21 ring. The divider shell there is carbon steel and this
22 robot has magnetic wheels. So the robot easily rides up
23 and down the divider shell. The robot has some very
24 high resolution cameras used by GE in a number
25 industries, particularly the use of technology to 06:21

1 inspect the roots of gas turbine blades, which are a 06:21
2 high-stress type issue that they've got to inspect
3 remotely. So they have employed this technology. It is
4 accurate enough to actually size the depth of indication
5 through very sophisticated camera work. Okay. 06:21

6 So we were able to inspect eight canisters --
7 the slide I'm showing you here -- so we picked eight
8 canisters. We did a full inspection of the outer shell
9 of the canisters. The eight canisters we selected,
10 first, we picked the canister that actually suffered the 06:22
11 hangup on August 3rd of last year. And that canister
12 did not drop, was safely and successfully lowered down,
13 but made contact with the shield ring. So we wanted to
14 make sure we inspected that. We looked at a canister
15 that was lowered on July 22nd. Although that canister 06:22
16 hadn't been hung up, the crew had difficulty and had to
17 lower it, lift it, realign it several times before it
18 successfully went down. Then we picked five other
19 canisters somewhat randomly to give us a good
20 statistical view of the 29 canisters that have been 06:22
21 downloaded. And we had very good resolution on the
22 canister. We were able to basically see 99 percent of
23 the shell of the canister, other than the last one inch
24 of the bottom plate, which is three inches thick so it's
25 not a concern, like the five-eighths canister wall would 06:22

1 be. 06:23

2 The observed wear marks, most of them were very
3 shallow, most of them actually had no depth to them, it
4 was a rub mark on the side of the canister. I should
5 mention the shield ring is carbon steel that's coated. 06:23

6 The seismic restraints are stainless steel, which is the
7 canister. So those are the things that rubs on this,
8 about a quarter of an inch clearance as it goes down.

9 We typically saw five -- you know, zero for most
10 of it up to five-thousandths of an inch. We did find a 06:23

11 couple of deep wear marks, the deepest of which was
12 twenty-six-thousandths of an inch, a very localized wear
13 mark or rub mark. These canisters are designed in
14 accordance with the ASME Code. So we use the ASME Code
15 to judge the acceptance criteria for our canisters. The 06:23

16 code would allow a depth with no action required of
17 .0625 inches or sixty-two-point-five-thousandths of an
18 inch. You can see most of our numbers were well below
19 that. Even the deepest wear was well below the limit.

20 So the bottom line is based on the eight 06:24
21 canisters there, we have no concern for the short-term
22 or the long-term for the scratches.

23 We go on. So --

24 DR. VICTOR: Tom, I think Marni Magda wants to ask a
25 question. 06:24

1 MR. PALMISANO: Yes? 06:24

2 DR. VICTOR: Marni Magda?

3 MS. MAGDA: Tom, how does this -- if I'm looking at
4 this picture of the camera that I'm --

5 MR. PALMISANO: Yeah. 06:24

6 MS. MAGDA: -- how is -- when you were on page 17,
7 you said qualification inspection ring underway, that
8 we would be -- allow inspection of full canister shell
9 if needed.

10 How is that different? 06:24

11 MR. PALMISANO: That is for the horizontal AREVA
12 system. That's for the older canisters for the
13 horizontal systems.

14 One of the things we found -- let me see if I
15 can go back to this. In developing the inspection 06:24
16 maintenance plan, we've been working on how to inspect
17 first the Holtec canisters then the AREVA canisters. it
18 turns out, as you can see from this picture, it is
19 relatively easy to safely take the shield lid off, put a
20 robot in there, if there's adequate clearance to get a 06:25
21 robot, and, like I said, we can see 99 percent of the
22 shell of the canister for vertical ones.

23 That ring on that other page, which we'll talk
24 about in length in the future, is for the horizontal
25 canisters. The design of that structure, when we do the 06:25

1 inspections, we don't have as ready access to some 06:25
2 aspects of the canister. So that ring is meant for a
3 second-level inspection. If we need to, we withdraw the
4 canister through the ring. So two different systems.

5 DR. VICTOR: And just to add to that, among the 06:25
6 differences is that the horizontal system is sitting on
7 slides.

8 MR. PALMISANO: On rails, yeah. Okay. Okay.

9 Real quickly --

10 MR. TAYLOR: Hold on, Tom, just got a question. 06:25

11 On the scratches on the Holtec system, how old
12 would those scratches be, and was there an incidental
13 corrosion noticed on --

14 MR. PALMISANO: So the offload -- the offload
15 activity started, I believe, by January, 2018, and this 06:25
16 was through August, we did 29. So they're all, let's
17 say nominally, a year or less. So they're fairly
18 recent. So let me address that question.

19 So, again, the marks we saw, you know, the
20 majority of them are very insignificant. Even the ones 06:26
21 that are, say, five-thousandths or the
22 twenty-six-thousandths, well within code-acceptable
23 numbers. What's important is these are -- this is a
24 stainless steel canister, and there's a protective oxide
25 layer that the rub mark or scratch can disturb. That 06:26

1 oxide layer reforms relatively quickly. So we did not 06:26
2 see any initiation of corrosion. We did not see any
3 issues like that. The oxide layer reforms. Okay. So
4 to give us the future protection that that oxide layer
5 provides. But importantly, you don't just assume that 06:26
6 that's good forever. This is under the inspection
7 maintenance program. So when we deliver that program in
8 2020 to the Coastal Commission, we'll lay out a series
9 of future inspections, which will include checking on
10 some of these. So more to come on that. Okay. 06:26

11 The bottom line conclusion, canister integrity
12 remains robust. There's no short-term or long-term
13 concern with these wear marks. We did a statistical
14 analysis based on these eight to ensure if there's
15 something we hadn't seen statistically, we're bound to 06:27
16 be well within our -- within ASME limits.

17 We have posted a white paper on the incidental
18 canister contact and scratches and this material. I
19 would urge you to look at that if you're interested. It
20 joins the white paper we had done previously on the drop 06:27
21 analysis. Had the canister hypothetically dropped,
22 would not have been breached. And again, we've got
23 links to frequently asked questions and questions from
24 the last meeting.

25 As Dan Stetson said, we're trying to provide 06:27

1 more information readily available to the public. 06:27

2 DR. VICTOR: I just want to underscore something

3 about this slide.

4 This Panel repeatedly asked and also, frankly,

5 helped Edison make sure that the technical information 06:27

6 is available to the public in plain English. Not an

7 engineer but --

8 MR. PALMISANO: Right.

9 DR. VICTOR: -- not to disparage engineers, but

10 sometimes what they write is not always clear. And 06:28

11 these papers are an important outcome from that.

12 People on this Panel and members of the public

13 want to see other papers on really important topics.

14 We're, in fact, synthesizing all this information. One

15 of these we've spent a lot of time on, the incidental 06:28

16 canister contact paper, is the question around the

17 chemistry of this chromium oxide reformation, which is

18 so important because, in effect, it's a self-healing

19 mechanism for stainless steel when it gets scratched.

20 Debra Lewis? 06:28

21 MS. LEWIS: Yes, thank you.

22 I just have a clarification. So --

23 MR. PALMISANO: Yeah.

24 MS. LEWIS: -- you said it was consistent with the

25 AS -- 06:28

1 MR. PALMISANO: ASME. 06:28

2 MS. LEWIS: -- ASME Code; right?

3 MR. PALMISANO: Right.

4 MS. LEWIS: So I -- you know, I understand that

5 there's a code for in-service code, so when it's loaded 06:28

6 and under pressure?

7 MR. PALMISANO: Again, I'll try to use a short

8 answer. It's sort of long.

9 The ASME Code starts with design of complements

10 for nuclear power plants, material selection, testing, 06:29

11 welding, re-service inspection, in-service inspection.

12 So it's an extensive code developed over many years.

13 Okay.

14 So this draws on various sections of the code

15 relating to acceptability of a mark on a canister during 06:29

16 fabrication as well as the, you know, future operation.

17 Either way -- and we've looked at all the portions of

18 the code that apply -- we meet the code requirements,

19 that even the deepest little mark that we saw at

20 twenty-six-thousandths of an inch is well below what the 06:29

21 code would say is allowable with no action other than

22 monitoring.

23 MS. LEWIS: And when -- I guess I want to just

24 clarify, when you say code, you're also -- that also

25 means the in-service code? 06:29

1 MR. PALMISANO: Yes. You have a whole family of -- 06:29
2 yeah.

3 MS. LEWIS: Okay. Thank you.

4 DR. VICTOR: Are you about to move on?

5 MR. PALMISANO: Yeah, I think I'm -- this is my last 06:29
6 slide.

7 DR. VICTOR: I'm not pushing you. I just want to
8 see if anyone else has questions about this. I have
9 one. Let me just ask mine. And then we should move
10 on. 06:30

11 You mentioned in passing that the horizontal
12 system should have incidental scratching. What do we
13 know from inspections of the large number of these
14 horizontal systems that are in service all around the
15 country in terms of the actual level of scratching, 06:30
16 whether it's material or not? I assume it's not
17 material. That may be a question you can't answer
18 today, but it would be helpful to --

19 MR. PALMISANO: Yeah, I think that's a future
20 question. 06:30

21 What we do know, the inspections that are being
22 done and have been done on these similar systems where
23 you really look for corrosion. Very briefly, what you
24 do in an aging management program, you look at what
25 would be the limiting things that could affect a 06:30

1 canister, performance of the life. And corrosion, 06:30
2 stress corrosion cracking, from the outer surface of the
3 canister is the living mechanism for these canisters.
4 So when they go in for these inspections, they're really
5 looking for deposits, indications of a pit that might be 06:30
6 the start of corrosion. And that's generally what
7 they're looking for. They may see incidental marks.
8 That generally is not their concern. They're looking
9 for corrosion.
10 DR. VICTOR: Okay. 06:31
11 MR. PALMISANO: And again, in a future meeting we
12 can talk more about that.
13 DR. VICTOR: That would be great.
14 Just to summarize kind of what I thought I heard
15 you say at the beginning of your remarks, though, the 06:31
16 scratchings, the -- one of the reasons this was such an
17 issue is the original safety analysis called for no
18 scratching, which was clearly not practical, and so one
19 had to figure out, yes, there's scratching because
20 there's life -- 06:31
21 MR. PALMISANO: Right.
22 DR. VICTOR: -- and the question is whether the
23 scratching is material.
24 MR. PALMISANO: Right.
25 DR. VICTOR: Thank you. 06:31

1 MR. PALMISANO: And with that, I'm going to turn it 06:31
2 over to Mr. Jearl Strickland from Holtec.

3 DR. VICTOR: I want to just mention I did not
4 introduce Doug Bauder as of one our speakers, because
5 Doug is so well known to this community. But I want to 06:31
6 welcome you as well as one of our speakers.

7 Be ready to speak after --

8 MR. BAUDER: Thank you.

9 DR. VICTOR: -- Jearl.

10 MR. STRICKLAND: Right. Thank you, Tom. 06:31

11 My name is Jearl Strickland. That's -- I'm an
12 executive director supporting Holtec International with
13 the overall responsibilities for movement of spent
14 nuclear fuel from wet to dry storage.

15 So tonight what I'm going to do is I'm going to 06:31
16 give you a little bit of -- a little bit of my
17 background and why I was selected by Holtec to come in
18 and take over the responsibilities here.

19 I'm also going to give you some insight into the
20 response that Holtec implemented after the August 2018 06:32
21 event, some of the changes that we've put in place to be
22 able to make a more effective loading program going
23 forward.

24 Just a little bit of information on Holtec
25 International and a lot of the work they have going on, 06:32

1 not only in the United States but around the world. 06:32

2 And then from there a summary of Holtec's
3 commitments going forward to be able to complete this
4 loading operation in the safest manner possible.

5 So with me, my career has essentially been 06:32

6 focused on the utility side of the operation, not on the
7 vendor or consultant side, that I spent over 38 years
8 with Pacific Gas & Electric with many different roles,
9 responsibilities over the years, including chief civil
10 engineer and responsibilities for developing the spent 06:33
11 fuel storage programs for both Humboldt Bay Nuclear
12 Plant and the Diablo Canyon Nuclear Plant. So in both
13 of those cases Holtec was the vendor that I utilized to
14 be able to safely put spent fuel into dry storage.

15 My last role that I had with PG&E, I was 06:33

16 responsible for the establishment of our technical
17 services division of our generation of business unit.

18 And under that program I was responsible for all of our
19 strategic projects, including license renewal, the

20 licensing, the basis verification program, divestiture 06:33

21 of hydro facilities, our regulatory projects, including
22 the response to the Fukushima Daiichi events. Nuclear

23 fuels from procurement of uranium, processing, all the
24 way through the spent fuel storage cycle. Geosciences

25 site projects, business compliance with risk management. 06:33

1 And then lastly the decommissioning of the Humboldt Bay 06:34
2 Nuclear Plant and then the plan for decommissioning for
3 the Diablo Canyon Plant.

4 I elected to retire in May of last year and
5 thought I would be retired for an extended period of 06:34
6 time and just do a little bit of consulting on the side,
7 including being on the advisory board for Holtec's small
8 monitor reactor. But after the event in August of last
9 year, then I was contacted by the owner of Holtec,

10 Kris Singh, and asked to initially come down and perform 06:34
11 an assessment, identify what happened here, to look at
12 the organizational structure, perform a detailed root
13 cause evaluation, establish corrective actions to be
14 able to address the issues that were in place and

15 essentially establish a program that would be able to 06:34
16 effectively safely move spent fuel from wet to dry
17 storage going forward.

18 So with that, some of the first actions that I
19 took was that -- put a team together of experts to go
20 ahead and look at what -- what caused the event. And so 06:35
21 with that, not only were I able to bring in experts in
22 root cause evaluations from external but also an
23 individual by the name of Paul Bemis that was an ex-NRC
24 executive and also the chief nuclear officer for a
25 couple of different utilities. And we essentially, as a 06:35

1 team, went through and did a very deep dive into the 06:35
2 event, the organizational structure, and developed what
3 we thought -- and still believe -- are very effective
4 corrective actions.

5 Some of the input that we have received from a 06:35
6 member of San Onofre's Nuclear Oversight Board was that
7 the root cause evaluation was the most detailed that
8 they had seen produced by a vendor out of the nuclear
9 industry. So that provided us some additional
10 confidence that we had performed a very deep dive. 06:36

11 So in the last CEP meeting you heard Tom give a
12 lot of details on different changes that we've made as
13 part of the overall program. But what I want to do is
14 highlight just a number of these. That when we went
15 through and looked at the overall programs, we focused 06:36
16 initially on procedures and training. But in looking at
17 that, we decided that we needed to make other changes
18 too, such as augmenting the leadership team and staffing
19 levels so that we had additional bench strength and
20 could provide additional oversight of all operations 06:36
21 throughout the loading process.

22 We went through and developed site-specific
23 governance that for us was very critical in being able
24 to set up what criteria was required for individuals to
25 hold certain positions within the organization, what was 06:37

1 the qualifications, what's the training, what was 06:37
2 necessary for them to successfully do their job.

3 We, in addition, went through and took the
4 standard Holtec procedures and really stepped and looked
5 at what we could do to be able to make these more 06:37
6 comprehensive, not let it be simply skill of the craft
7 committee areas and updated them such that they're very
8 prescriptive.

9 And one of the important aspects of it is that
10 they now have numerous hold points to be able to address 06:37
11 critical steps and just the ability for the loading crew
12 to step back and look at lessons learned, look at what
13 potentially could happen if -- when you're taking a
14 critical step. It also provides the opportunity for SCE
15 to be able to have their own site personnel be able to 06:38
16 validate that appropriate steps or have them prepare and
17 are being implemented at that point.

18 An example of that would be that as you're going
19 through the downloading process of moving that
20 multipurpose canister from the transfer cask into the 06:38
21 UMAX storage system, that it has a hold point where you
22 lower the multipurpose canister until just above the
23 shield ring. And then from there, then, it's a
24 validation that you do have that canister centered to
25 the point where you're not going to potentially hang it 06:38

1 up on the shield ring, like happened in the August 06:38
2 event. So steps like that that are added to the
3 procedures add a lot more guidance and confidence that,
4 in turn, you're not going to have a repeat type of
5 event. 06:38

6 Additionally, one of the other critical
7 components is of the training side. If you look -- me
8 growing up essentially on the Part 50 Power Plant side
9 of the license, that we always required that all of our
10 training be consistent with what's called a systemic 06:39
11 approach to training. Part 72, that's not specifically
12 required.

13 So decisions were made in consultation and
14 agreement between Holtec and SCE that we would use a
15 more advanced training program that was more systematic 06:39
16 and that it was more prescriptive in how to teach the
17 craft, cask line supervisors and project managers, each
18 with the specific attributes of loading the cask system.

19 It went on to where not only did it cover the specific
20 steps in how you perform a loading, but also stepped 06:39
21 back and also looked at the licensing constraints to be
22 able to provide good overviews of why the system is
23 designed the way it is, why it's licensed the way it is,
24 and what -- that gives the overall team a better
25 understanding of the overall system as they proceed 06:40

1 forward. 06:40

2 The training modules are very detailed and that
3 we've gone through and trained all levels throughout the
4 loading operation on the training modules. Again, that
5 wasn't enough in that the hands-on training became a 06:40

6 critical component also to where by having the craft
7 actually perform functions in evaluating exercises by
8 dry runs with the Nuclear Regulatory Commission or just
9 our own practice, we were able to assess the skills and
10 verify that the team was ready to go proceed with the 06:40
11 loading of fuel.

12 DR. VICTOR: Before you move on, can I just ask
13 quickly --

14 MR. STRICKLAND: Sure.

15 DR. VICTOR: -- is Holtec now -- first of all, I 06:40
16 really appreciate your particular comments related to
17 just systemic training.

18 In simpler language, this is part of what's
19 often called the nuclear culture. This key part to
20 operational reactors has not been as central a part of 06:41
21 reactors that are going into decommissioning and what,
22 effectively, you're telling us is you're putting more of
23 that nuclear culture into the decommissioning process.
24 I think that's very important.

25 My question is: Are you doing this at the other 06:41

1 sites where Holtec is operating, or is this something 06:41
2 bespoke to San Onofre?

3 MR. STRICKLAND: So that's a very good question,
4 that, you know, Holtec has been able to take the
5 lessons learned from here and all the investment that's 06:41
6 been made in advancing procedures, in advancing the
7 training modules, and have been able to start migrating
8 that into other loading operations across the country.

9 So, in essence, if -- I hate to look back and
10 say that the incident here provided value, but it 06:41
11 actually did in the long run in that I think it
12 prepared -- prepares a much better program for Holtec
13 for loading across the country.

14 DR. VICTOR: John Taylor?

15 MR. TAYLOR: Is there -- has Holtec looked at the -- 06:42
16 the -- ring that caused this thing to jam, to redesign
17 that ring so it wouldn't cause a hangup?

18 MR. STRICKLAND: They have not.

19 But what I can tell you is that by the processes
20 that have been added, we've been able to have cameras in 06:42
21 place that they now have hold points to be able to
22 visually validate that you have appropriate alignment.
23 Then the potential for hangup has essentially been
24 eliminated, and that -- but so it's using these features
25 instead of an engineered feature for being able to 06:42

1 change the design of that shield ring. 06:42

2 MR. TAYLOR: And then in the training process when

3 you -- are you actually loading and unloading a

4 simulated cask and everything under the full weight?

5 That's the process? Or is it some kind of programmed 06:42

6 something or a --

7 MR. STRICKLAND: That's correct. It's part of not

8 only the demonstration before the Nuclear Regulatory

9 Commission, but also just the vetting of the changes to

10 the procedures and vetting the -- the successfulness of 06:43

11 the training modules that we performed numerous

12 operations of just what you would consider practice,

13 evaluation-type runs using a simulator.

14 MR. TAYLOR: A simulator, but not an actual

15 container? 06:43

16 MR. STRICKLAND: Not an actual PC that you're --

17 you're not going to just practice with a multipurpose

18 canister that's loading fuel.

19 MR. TAYLOR: No, no, but I mean like a simulator --

20 MR. STRICKLAND: It's with a simulator that has the 06:43

21 same weight as --

22 MR. TAYLOR: Oh, okay.

23 MR. STRICKLAND: -- as a loaded multipurpose

24 canister.

25 MR. TAYLOR: I see. Thank you. 06:43

1 DR. VICTOR: Continue on. 06:43

2 MR. STRICKLAND: So some of the other additions that

3 we've made is that we've added a full-time training

4 manager. We have a quality assurance and control

5 manager that's in place now. I've added additional 06:43

6 cask loading supervisors and project managers.

7 And again, the key with that for me is having

8 additional bench strength, that most loading campaigns

9 that Holtec performs are a short duration. And as such,

10 you bring a team in and you get them trained, they load 06:44

11 six to ten casks and they're done. Having a longer-term

12 operation such as this, then I -- I am concerned about

13 fatigue, complacency and turnover of staff. So I want

14 to make sure that I've got plenty of bench strength in

15 place, that, Number 1, I can limit the amount of 06:44

16 overtime that people work. Number 2, I can make sure

17 that I have fatigue breaks for the staff so that we can

18 schedule weeks off throughout the loading campaign to be

19 able to get people time to recharge, to take care of

20 other activities, just so that you avoid the fatigue and 06:44

21 complacency. We've also set a process in place now that

22 we've vetted the skilled labor that comes in to where

23 it's a validation that they do have the right level of

24 nuclear experience and the nuclear mindset as well as

25 being able to show that they have the right skill base. 06:45

1 And so that also involves the interview process, to make 06:45
2 sure that we are getting the correct set of labor that's
3 necessary to safely perform the work. We've also
4 implemented a performance monitoring and management
5 system so that as we proceed forward that we're able to 06:45
6 track the performance of the overall team. And that
7 starts from my project managers and goes all the way
8 down through the labor.

9 DR. VICTOR: Donna Boston?

10 MS. BOSTON: Just a quick question. Thank you. 06:45

11 All of that does sound very helpful. The
12 limiting of the overtime and some of those other -- what
13 I would have thought might have been in regulation
14 somewhere along the line, but it doesn't sound like it
15 is part of that process you're instituting, you know, in 06:46
16 hindsight, and then trying to be proactive. Some of
17 those other things that I know I see in working in other
18 areas where we do limit overtime, we do -- we have
19 required rest periods. There's a lot of checks and
20 balances to that. But it sounds to me like you're 06:46
21 implementing this as outside regulation.

22 MR. STRICKLAND: Yes, that -- a Part 50 license
23 definitely requires.

24 DR. VICTOR: The Part 50 is for an operational depth
25 reactor? 06:46

1 MR. STRICKLAND: But Part 72 does not. 06:46

2 So with me essentially growing on the Part 50
3 side, then it's important for me make sure that we're
4 somewhat consistent with what Part 50, the operating
5 license side of the plant. 06:46

6 DR. VICTOR: I just want to ask whether Linda Howell
7 or Scott want to comment on this or wait until the
8 NRC's portion. If you want to comment right not on
9 this?

10 MS. HOWELL: In terms of when that overtime 06:47
11 restrictions exist --

12 DR. VICTOR: Well, I think, if I can --

13 MS. HOWELL: Reframe your question, David?

14 DR. VICTOR: The question is -- is whether there's
15 something that can be learned from this that changes 06:47
16 the regulations, or whether this is something that is
17 now becoming baked in the best practice, and that's the
18 way it's implemented throughout the --

19 MS. HOWELL: At the present time we don't have any
20 proposed rule making on that specific aspect. There 06:47
21 are some changes -- well, I'll address those a little
22 bit when Scott and I talk.

23 But there are some differences between a Part 50
24 or operating facilities and requirements associated with
25 those facilities in that stage of life than there are 06:47

1 with the Part 72 licenses. 06:47

2 Normal operations for a spent fuel storage
3 licensee, you would be loading six to eight canisters
4 from -- you know, anywhere from 18 to 24 months apart.

5 So you don't have this prolonged period of activity. 06:47

6 For Southern California Edison -- and I don't to
7 speak for Doug -- it's a little bit different because
8 you're trying to do a full offload for Units 2 and 3 so
9 that they can then proceed with decommissioning. And so
10 it's just continuous offload. And that's why there are 06:48
11 some additional problems that are posed in this case
12 that aren't commonly seen at other utility sites.

13 DR. VICTOR: Great.

14 And I'm sure Doug, when he talks about the path
15 forward will talk about what that looks like. 06:48

16 MR. BAUDER: Yeah. I was going to talk about
17 oversight.

18 But Jearl and I have talked about this idea of
19 overstaffing, make sure there's proper breaks.

20 I will tell you that during plant operations we 06:48
21 were exposed to Part 50 through the work hour called the
22 NRC Work Hour Rules. So even when we did fuel
23 offloading campaigns with our own site teams during
24 plant operations we adhered to the rule. Now we're in a
25 different space. It's time to look what is the proper 06:48

1 crew size, what are the proper break intervals, so that 06:48
2 you can avoid fatigue. That's what Jearl was referring
3 to.

4 DR. VICTOR: Thank you.

5 Ted Quinn. 06:49

6 And then I'm going to let Jearl go on to his
7 last few slides.

8 MR. QUINN: Ted Quinn. From my perspective, having
9 someone of your caliber come onboard was an absolute
10 requirement for the Holtec team, because the focus is 06:49
11 on conduct of operations. And with your level and
12 responsibility, it seems that that has a key
13 performance thing.

14 I wanted to ask you for your staffing. You have
15 the ability to -- not just an A team but the people that 06:49
16 come on to replace people will absolutely be qualified?

17 MR. STRICKLAND: Absolutely. That is a requirement
18 of us, a requirement of mine as well as the Holtec
19 leadership. So --

20 MR. QUINN: Okay. 06:49

21 MR. STRICKLAND: -- they'll be absolutely qualified.

22 DR. VICTOR: We should let you go onto your last two
23 slides.

24 MR. STRICKLAND: Okay. The last point of this
25 slide, as Tom covered last time, a number of the quick 06:49

1 changes that we've implemented. And that the only part 06:49
2 that I want to add to that is that on top of the series
3 of staffing changes, equipment changes, that I put
4 program changes in place to require that I myself, my
5 project managers and then the members of the corporate 06:50
6 staff of Holtec, that we rotate people through to be
7 able to provide additional oversight through critical
8 steps in the loading operation just so that we can
9 perform observations, document what we see and continue
10 to learn. So be part of a continued learning team. 06:50

11 DR. VICTOR: Linda Howell?

12 MS. HOWELL: Yeah. Thank you.

13 I just wanted to address Ted's question about
14 replacement or supplemental staff at Southern California
15 Edison. 06:50

16 Again, I want to emphasize that Jearl's talking
17 about a lot of improvements that Holtec has undertaken.
18 But the real licensee in this instance is Southern
19 California Edison. And Southern California Edison has
20 made changes to their training program. We are the ones 06:50
21 who will be independently inspecting compliance with
22 that training program. So if supplemental staff does
23 come on, you know, through this long duration and they
24 don't meet the same qualifications, you'll be hearing
25 about it from us. 06:51

1 DR. VICTOR: I know that Doug Bauder's going to talk 06:51
2 in summary form about that.

3 MR. STRICKLAND: And I'll move through this quickly,
4 that when the loading resumes, our focus will be on the
5 safe movement of fuel from wet to dry storage. 06:51

6 So we've talked about the practice runs that
7 we've completed multiple. And so we've vetted these
8 procedures well. It will take some time for us to
9 finish all of our refresher training and that -- before
10 loading starts. Then it will be SCE that provides input 06:51
11 on what that date will be.

12 I think that Doug's going to cover that.

13 So summary, Holtec is committed to safely
14 completing the transfer of spent fuel from wet to dry
15 storage. And that I want to let you know that I'm 06:51
16 committed to personally making sure that we complete the
17 transfer of spent fuel safely. That I'll continue to
18 provide the level of oversight that I believe is very
19 important to be able to keep the team focused, keep them
20 staffed appropriately and keep us moving on the correct 06:52
21 path. The procedures, training and equipment have been
22 upgraded, and we've made substantial changes in culture,
23 that what I see today versus when I first got here in
24 August, that the interactions between SCE and Holtec
25 were that they were two separate teams, and that we've 06:52

1 made tremendous progress for the two organizations to be 06:52
2 able to work hand in hand as one collective team. So
3 I'm very pleased with the progress there.

4 Lessons learned, as I noted earlier, that are
5 being applied across Holtec. And I think it will be to 06:52
6 the benefit of Holtec and all the other utilities going
7 forward with that change.

8 And then last the bullet is that Holtec is
9 committed to the long-term support of SCE for handling
10 spent nuclear fuel. And so with that, they would hope 06:53
11 that as the consolidated interim storage facility is
12 developed in New Mexico that there may be an opportunity
13 to be able to move the fuel there in the future.

14 That's it.

15 DR. VICTOR: Thank you very much. 06:53

16 I wanted to see -- Jim Desmond?

17 MR. DESMOND: Thank you, Mr. Chair.

18 I guess I have a question for -- for Holtec.

19 I mean, the problem, I guess, it seemed to me
20 is -- I mean, it's great that you brought on more people 06:53
21 and you have more training and everything else. But the
22 problem is the canister just wasn't lined up perfectly
23 over the hole is kind of what, I think, probably caused
24 this thing. And it's very well shrouded, which i t
25 probably should be to protect the personnel. So what 06:53

1 are you doing to ensure -- how do you -- I mean, you 06:54
2 lower it a little bit, and then you have somebody check?
3 Or do you have cameras or lasers? What are you doing to
4 make sure that you're hitting the bull's eye when you go
5 in -- when you're dropping -- putting the canister down 06:54
6 the hole?

7 MR. STRICKLAND: So there's several components to
8 that: One is that the positioning of observers to be
9 able to watch as it traverses down. Second, there is a
10 camera. There's been also a telltale to where you're 06:54
11 able to see whether or not it continues to be lowered.
12 And then -- yeah, the key with it is that we have the
13 ability to be able to have hold points where we know
14 how far we lower it. And then from there be able to
15 visually check it, either with the camera or with the 06:54
16 spotters that are in close proximity, to be able to
17 make sure you have appropriate monitoring. And if all
18 that fails, then there are load shackles to be able to
19 see if there's a load reduction because it's coming
20 into contact with the shield ring. 06:54

21 MR. DESMOND: All right. Thank you.

22 DR. VICTOR: See if there any other questions?

23 I have two, but I want to see if there's --
24 Martha?

25 MS. MCNICHOLAS: The additional personnel, the 06:55

1 supervisors and everything, these are Holtec people, 06:55
2 these are Edison people, or are these outside contract
3 people?

4 MR. STRICKLAND: So for the Holtec team we've added
5 additional oversight. 06:55

6 But Mr. Bauder's going to talk about the
7 additional oversight that SCE has provided too.

8 MS. MCNICHOLAS: Okay.

9 So the people that are actually observing and
10 doing this work, but make sure -- it's great that you're 06:55
11 doing all this. It's great that Edison is doing it.

12 But if you're hiring the guys down in the corner to come
13 in and learn how to do this and --

14 MR. STRICKLAND: When you look at the project
15 managers and cask loading supervisors, these are 06:55

16 experienced people that have gone through multiple
17 loading campaigns with Holtec to be able to, then,
18 develop the experience and qualifications then to be
19 able to progress up to the cask loading supervisor

20 position and then ultimately into a project manager 06:56
21 position. So it takes these people a number of years
22 of work before they qualify for those level positions.

23 MS. MCNICHOLAS: Okay.

24 DR. VICTOR: Kathy Ward?

25 MS. WARD: Is it true that the vertical loading 06:56

1 system, that's something new that Holtec brought 06:56

2 forward, is it not?

3 MR. STRICKLAND: The UMAX storage system that --

4 that's a new system.

5 But you look at vertical loading systems -- I 06:56

6 developed a system for Diablo Canyon -- and there is a

7 vertical system, just happens to be aboveground. And

8 that -- it's a similar process in that they put a mating

9 device on top of the storage overpack, put the transfer

10 cask on top of that and proceed with lowering the 06:56

11 multipurpose canister through it. So it's a similar

12 system that's used elsewhere. Just ends up with a

13 shield ring configuration with UMAX. The tolerances are

14 a little tighter.

15 MS. WARD: Okay. I was just trying to come up with 06:56

16 a reason why Holtec did not have these systems in place

17 for the lowering of it as opposed to we have the

18 horizontal system before and I haven't ever heard of

19 this being an issue. But you're saying it has more to

20 do with the ring? 06:57

21 MR. STRICKLAND: It deals with the shield ring.

22 And just one of the points I didn't talk about

23 is that as part of our root cause evaluation we stepped

24 back on the corporate side of the organization and

25 started looking at how the engineering department 06:57

1 performs the modifications. How do they vet designs? 06:57

2 And so Holtec developed what they call a blue ribbon

3 team to be able to go back and vet a lot of the changes

4 that have been made over the last few years on -- in the

5 loading systems and then also to then have that team in 06:57

6 place as they continue to make improvements and changes

7 to the system. So again, another, you know, good

8 outfall from this endeavor.

9 DR. VICTOR: Okay. I just want to ask two

10 questions. 06:58

11 Thank you very -- first, I just want to make the

12 comment: Really appreciate you being here with us

13 tonight and providing all this information. And please

14 convey back to the folks at Holtec central our

15 appreciation for that and our appreciate for ongoing 06:58

16 conversations.

17 So I guess I have two questions: One is -- and

18 this is reflecting on lots of comments we've heard from

19 different members of the public. The first one really

20 came up last meeting of the Community Engagement Panel, 06:58

21 where people raised questions about why and how we --

22 the different plants that are using Holtec equipment

23 aren't able to learn better from each other what the

24 best practices are. So I'm curious as to whether

25 there's now a centralized database with information of 06:58

1 incidents or what that looks like. And you talked about 06:58
2 lessons being applied across site operations. Give us a
3 little more color as to what that looks like?

4 MR. STRICKLAND: Sure. There's a Holtec users group
5 that each one of the utilities are part of. 06:58

6 DR. VICTOR: The acronym is HUG.

7 MR. STRICKLAND: HUG, correct.

8 And so the -- out that users group that all the
9 lessons learned across various plants are captured in a
10 database and provided for the other utilities to use. 06:59

11 One of the things that I've asked the director
12 of site services for Holtec to commit to and to proceed
13 forward with is to make sure not only is the information
14 put in the Holtec users group database, but that they
15 make sure that they share it in a manner to where the 06:59
16 other utilities actually see it before them, that it's
17 just not potentially lost in the database.

18 Also, when Holtec is actually performing the
19 loading for utilities, we now have this lesson learned
20 database that we've configured the procedures such that 06:59
21 you -- before you perform a critical step, that you
22 refer back to lessons learned for that activity so that
23 you keep those lessons learned fresh in the craft mind,
24 cask loading supervisors mind, and the project manager.
25 So that way you leverage the lessons learned. 07:00

1 DR. VICTOR: Last question before move on and -- 07:00
2 Doug Bauder.
3 How would -- this presentation is enormously
4 informative.
5 How would members of the public learn more about 07:00
6 what you learned from the root cause analysis, what
7 you're doing going forward and how this may be best in
8 going forward. Are you planning -- for example,
9 Tom Palmisano talked about the white papers that Edison
10 is putting together on important things the public cares 07:00
11 about. Are you planning to do something similar? Or
12 how would we find out more?
13 MR. STRICKLAND: You know, that's a good comment,
14 good question.
15 And that -- what I'll do is I'll go back and 07:00
16 look at opportunities to be able to provide more
17 constructive input that shows, again, what the lessons
18 learned are and, in turn, some of the actions we've
19 taken. So thank you for that input.
20 DR. VICTOR: Thank you very much. That would be a 07:00
21 very constructive way forward.
22 So I want to just -- what we're doing tonight is
23 we've heard from Tom Palmisano about particular one of
24 the central issues that is -- that has arisen since the
25 last meeting of the Community Engagement Panel about the 07:01

1 downloading process. 07:01

2 We've heard just now from Jearl about what
3 Holtec is doing.

4 I want to hear -- we want to hear now from
5 Doug Bauder, over a couple of slides about the changes 07:01
6 in oversight of Edison, which is the licensee, and what
7 the path forward looks like.

8 Doug, the floor is yours.

9 MR. BAUDER: Thank you. Good evening.

10 So this is my second Community Engagement Panel 07:01
11 meeting. I was -- had the opportunity to meet some of
12 you at the first meeting in March. I look forward to
13 meeting more of you going forward.

14 I just want to summarize a few areas that Jearl
15 discussed -- thank you, Jearl, for stepping us through 07:01
16 that -- and talk specifically about the oversight. And
17 because when you look at procedures, you look at
18 training, and you look at what happened in the
19 August 3rd event. Beneath all of that is the
20 responsibility of Edison for having good oversight. So 07:02
21 I wanted to talk through that a little bit tonight.

22 Now, I also want to talk a little bit about
23 training before I address this slide.

24 We've had some questions about training, because
25 Jearl talked about systems approach and training and how 07:02

1 it really isn't required under Part 72, so to speak. 07:02

2 When we looked at the event and looked at what
3 happened on August 3rd and looked at some precursor
4 issues, we decided, along with Holtec, that the
5 procedures had to be completely overhauled. So when you 07:02

6 overhaul procedures and then you have new work methods,
7 you have to develop training to go along with that, and
8 the training is task-based. So you take little
9 individual pieces of the job and you build a training
10 matrix. And you say to yourself, "Does the worker have 07:02

11 the right knowledge and skills and abilities to do this
12 task?" And then when you analyze that through the
13 systems approach, you come up with a combination of
14 either classroom training, which the Holtec workers are
15 going through right now, as I speak, this week, and next 07:03

16 week and the week after, and field training, which
17 involves on-the-job training -- you'll hear a term OJT
18 sometimes. So we brought in specialists at Edison to
19 help Holtec re-build this training matrix for us.

20 And when Jearl talks about using it elsewhere, 07:03
21 that's what he means in terms of spreading this around
22 the Holtec -- the users, when they do further long-term
23 campaigns. Because we thought it was vitally important,
24 because when a new worker shows up, that worker has to
25 be integrated and trained properly. You can't just put 07:03

1 a worker in the field and -- when the worker's 07:03
2 satisfied, the specific supervisors, say, "Well, okay.
3 That worker is good to go now." You have to verify the
4 training. So this was an area that we really paid a lot
5 of attention to since the August 3rd event. 07:03

6 So our changes to oversight -- once again,
7 oversight was under all of what happened. And we simply
8 did not have the proper oversight in place. So he
9 addressed those weaknesses. We changed out some
10 leadership. We brought in people who are trained and 07:04
11 have experience in the Holtec systems. We also trained
12 all of our oversight people on Holtec systems and gave
13 them the exact same training.

14 I stipulated that we bring in a management
15 oversight program to the staging [sic]. And this 07:04
16 requires four or five key managers of the station to be
17 in the field every week. And when a campaign starts,
18 our managers will split up and go 24/7 to support
19 operations as required. And that program reports out
20 once a week. And we capture anything observed in our 07:04
21 database to improve and learn from that.

22 We brought in some specific personnel who are
23 experts in fuel transfer. And we're going to do
24 assessments periodically throughout the campaign. So
25 for example, at some point we'll be staffed up enough to 07:04

1 do fuel movement on both units at the same time, Unit 2 07:05
2 and Unit 3.

3 The question will be: Are we ready to do that?
4 So as we work through the first few campaigns, we'll
5 stop, we'll roll up all of the comments from workers, 07:05
6 we'll roll up everything in our corrective action
7 database, we'll go through a review process to find out
8 are we ready to do fuel movement on both units. It's
9 very important. We're not just going to assume that
10 we're ready. We're going to verify we're ready. 07:05

11 Further, before we start any kind of fuel
12 campaign, we're going to have a formal challenge
13 process. We used this challenge process to get ready
14 for two of the key NRC inspections, which occurred in
15 January and February. We'll be using a similar process 07:05
16 later this month to verify we're ready before we move
17 any fuel at all. That challenge process will involve
18 industry experts. I will oversee it. And we won't
19 actually start without my approval, that we are ready,
20 with recommendations from the team. 07:06

21 So the path forward. Jearl indicated we're
22 going through extensive preparations. The reason we're
23 doing that, because we've had to pull workers in, some
24 experts, Holtec experts, supervisors, project managers,
25 iron workers, other workers from all across the country 07:06

1 back to San Onofre. That involved remobilization, 07:06
2 retraining in key jobs and responsibilities and
3 requalification. So even if a worker had been involved
4 in fuel handling here before, we assess -- once again, I
5 reference that training matrix, verify they're 07:06
6 task-qualified for what they're going to be doing. Then
7 we're going to work through all our final equipment
8 checks to verify everything's certified. We'll put
9 everything through that final challenge process.

10 So I can't sit here in front of you say, "Date, 07:06
11 time certain, this is when we're going to plan to handle
12 fuel again." What I can tell you is we won't handle any
13 fuel until we're totally ready. This involves the
14 checks that I've mentioned, internal SCE management
15 reviews and my final approval before we start. 07:07

16 So we do expect to restart in the coming weeks.
17 We don't know exactly what day or what time. We will be
18 very transparent about that. We will communicate with
19 the public. I will be calling the NRC to let the NRC
20 know when we're finally ready. We'll be open about it, 07:07
21 and we'll let you know when that date is. But once
22 again, not until we're totally ready to start.

23 DR. VICTOR: Thank you very much.

24 Comments or questions?

25 I have -- 07:07

1 MR. TAYLOR: Could you remind me what's the time -- 07:07
2 how much time will it take to get everything put into
3 dry storage once the restart takes place?
4 MR. BAUDER: So we've projected that time frame to
5 be from February of next year through the end of April 07:07
6 of next year.
7 The reason we're saying that is, you know,
8 the -- the campaign's long, there's holiday periods,
9 there's workers' periods where we're going to allow
10 worker breaks. We could encounter an issue with 07:08
11 equipment where we have to stop and fix the equipment
12 appropriately. We could have weather. Probably won't
13 rain too much through the summer, but during heavy rain
14 periods you do not handle the canisters. So there's any
15 number of things that could happen. So as you look at 07:08
16 the schedule, you kind of bracket it between February
17 and April.
18 MR. TAYLOR: Okay. Thank you.
19 DR. VICTOR: Jerry Kern?
20 MR. KERN: Just one quick question. When the 07:08
21 campaign restarts, will there be an NRC on-site
22 supervisor or monitor?
23 MR. MORRIS: It's probably better answered by --
24 MS. HOWELL: I think I -- yeah, we'll touch on that
25 when we -- 07:08

1 MR. BAUDER: If you watched the webinar this week, 07:08
2 the NRC stated, I think, Linda, on the webinar, that
3 you'd be doing surprise drop-in inspections, which we
4 fully expect and we welcome throughout the process.

5 And they could be at any time. 07:09

6 DR. VICTOR: We'll get to that in a second.

7 And other comments or questions?

8 I have one.

9 I've committed to meet with your board -- the
10 Edison board of directors before the next CEP meeting to 07:09

11 talk with them about what we're hearing, what's

12 happening, what we're observing, what we're hearing from

13 the public and so on. I'd welcome comments and

14 questions from members of the public in advance of that.

15 It's going to be sometime in mid-August. 07:09

16 Can you tell us a little bit about how involved

17 the board is? What kind of questions they're asking?

18 What their engagement is here?

19 MR. BAUDER: Right. So at the board of directors we
20 have two key committees. One of them is the safety and 07:09

21 operational -- safety and operations committee. And at

22 every board meeting now, for the past year plus, the

23 board has been very interested in not just fuel

24 transfer operation at SONGS but the entire

25 decommissioning picture, what is going on with our 07:10

1 personnel. Recently, of course, with the improvements 07:10
2 we've made to get ready for fuel offload, a high
3 interest there.

4 I have presented to the board at the last two
5 meetings, to the safety and operations committee, and 07:10
6 the board at the end of this month will hear an
7 additional presentation about fuel transfer. And it's
8 specific to fuel transfer.

9 DR. VICTOR: Great. Thank you very much.

10 So I want to -- now, Scott Morris and 07:10
11 Linda Howell, both from the Regulatory Commission,
12 you've had an extremely informative webinar earlier this
13 week. And I believe copies of those slides are widely
14 available, and I think we've also posted them on our
15 site. 07:10

16 I now give the floor to both of you.

17 MR. MORRIS: All right. Thanks again for the
18 invitation. Linda and I are both happy to be here, as
19 always. I guess this is our third one.

20 I do want to just comment on a couple of things. 07:10
21 I've got a bunch of things I wanted to touch on. I
22 don't have slides. I wanted to adapt what I said based
23 on what I was hearing today and, of course, the
24 questions from the public. They don't give the members
25 of the panel enough time to ask questions they feel are 07:11

1 most important. So I'm going to be very brief. 07:11

2 And I do want Linda to just kind of summarize
3 the key messages from the webinar for those of you who
4 may have not had an opportunity to listen to it or go
5 back and see the postings we made to our website. 07:11

6 But I want take on, first off, why we even
7 webinars. And the reason is simple. We want to be able
8 to deliver -- we -- I'll say it very simply -- we want
9 to be able to deliver the outcome of our decisions in
10 the most timely way we possibly can. And traditionally, 07:11
11 you know, we would -- we felt a timely way to deliver
12 those messages was through, you know, documents
13 associated with our licensing actions or through
14 inspection reports. And -- however, those things take
15 time to create, get the concurrence process, get the 07:12
16 legal checks, get put into our document management
17 system. You get the idea. It can be 45 to 60 days
18 before those artifacts are made available to the public
19 for review.

20 We made a conscious decision in the case of 07:12
21 San Onofre -- and we've done this elsewhere, it's not
22 unprecedented -- but to get out the information just as
23 quickly as we possibly can. So the most expeditious way
24 to do that is through the webinar process.

25 Now, it doesn't mean those other artifacts 07:12

1 aren't going to happen. They will. The inspection 07:12
2 report from the inspections that Linda talked about and
3 summarized in the webinar on Monday will be part of a
4 formal inspection report. All the bases for our
5 decisions and the things that we reviewed, the 07:12
6 inspector's name, by name, who did the review -- I mean,
7 everything that formed the basis for our ultimate
8 decision-making will be captured in that inspection
9 report.

10 I will also tell you that we are currently 07:13
11 planning a town hall meeting in the -- somewhere in the
12 local area. We don't have a specific date, time or
13 venue, but we are going to have it. I've committed to
14 do that.

15 Now, I will bring with me my leadership, the 07:13
16 appropriate leadership, and down right to someone in the
17 various factors that frequent the site and to be able to
18 interact with you all in a more, perhaps, less formal
19 setting and be able to take your questions in more of a,
20 you know, hopefully informative way. So I'm committed 07:13
21 to do that. Again, we'll be working with a suitable
22 local organization or venue to make that happen. So
23 just be aware of that.

24 So that -- and then hopefully by that time we'll
25 be able to talk more about some of the details that 07:13

1 you're hearing today, but also to share our -- you know, 07:13
2 the results of our inspections that are associated with
3 the resumption of fuel handling and fuel transfer
4 operations. So that's why we're doing the webinars, is
5 to get the information in your hands as soon as we 07:14
6 possibly can. We're committed to openness and
7 transparency to the maximum extent practical.

8 A couple of other things -- and I do want to
9 give Linda a few minutes, and I know we're running late
10 on the agenda -- but I want to give -- I want to give a 07:14
11 little -- I want to give some credit to the Edison
12 folks. They made the changes that they made with
13 respect to this -- this -- the -- let me back up.

14 On the May -- or the March CEP when I -- Linda
15 and I were here, we talked about -- and I -- about the 07:14
16 scratching issue and how it was the singular issue that
17 was essentially holding up the resumption of the fuel
18 handling. And at the time they said that issue had yet
19 to be resolved. And, in fact, I did a YouTube video
20 that helped explain that even more. But in the 07:15
21 intervening time, of course, we've -- or the two issues
22 that were -- what are the -- what's the technical
23 concern, is a certain amount of scratching, gouging,
24 roughing -- whatever you want to call it -- is it
25 technically okay from a safety standpoint? That's the 07:15

1 first issue. 07:15

2 Second issue was: What's the regulatory process
3 that has to be engaged in order to move forward once the
4 safety issue has been addressed?

5 So what I told you at the time was both of those 07:15
6 issues were -- remained unresolved. Well -- so in the
7 intervening time, San Onofre -- the Edison folks have
8 been able to supply, and we've been able to
9 independently validate and verify through our own
10 inspectors and our own independent calculations and our 07:15
11 reviews -- again, all of which -- or most of which or
12 the poignant [sic] parts of it will be captured on an
13 inspection report. In that intervening time we've been
14 able to address that issue. And the manner in which it
15 was done in regulatory space was -- and I don't want to 07:16
16 get too arcane here, but one of -- the regulation that
17 became applicable, and that they could have gone through
18 a number of processes, they could have submitted a
19 license change, Holtec could have made a change to their
20 certificate of compliance for which San Onofre and 07:16
21 Edison would then incorporate as part of their system
22 here, or they could have -- there could be regulatory
23 exemptions they could have pursued. Or they could have
24 pursued, if appropriate, what is known as the
25 10 C.F.R. 7248 process. And that's the bureaucratic 07:16

1 speak I don't want to dig too much into. But 07:16
2 essentially the element of 7248 is there are specific
3 provisions in our regulations that enable our licensees
4 to make changes to their facility or their of systems
5 that have already been licensed without prior NRC 07:17
6 approval so long as they meet certain criteria. Right?
7 That's the 7248 regulation. And it's very prescriptive
8 in terms of, you know, the questions that have to be
9 answered before they can actually make that change to
10 their facility without prior regulator approval. 07:17
11 In this case Edison determined and -- that they
12 could engage that process with this scratching issue
13 using the 7248 process. Said another way, it basically
14 means that they were able to make the change to their
15 system or their safety analysis without prior regulatory 07:17
16 approval. Okay. Let's just let that sink in for a
17 second.
18 So you might ask, "Well, then if they did that,
19 why didn't they just start moving fuel after they
20 completed that analysis?" And the answer is: They 07:18
21 could very well have. And the reason I said I should
22 give them a little bit of credit -- I give them a little
23 bit of credit in this case is because even though they
24 were -- they convinced themselves that they could engage
25 that 7248 process and make the changes without prior NRC 07:18

1 approval, they elected to wait for us to review it 07:18
2 anyway.

3 Now, we would review it after the fact as part
4 of our inspection process. And, in fact, 7248 changes
5 are made -- they're not infrequent, usually very minor 07:18
6 in nature, and we pick them up and review them in
7 inspection space and determine if, in fact, we agreed
8 that the assessment they did under 7248 was appropriate.
9 And when they don't, then we use enforcement tools to --
10 you know, to modify the design basis or whatever is at 07:18
11 issue.

12 In this case Edison said, after they had
13 completed their analysis, the regulatory analysis, it
14 said, "We don't need NRC approval." They said, "But
15 we're going to wait for it anyway." So that's the piece 07:19
16 I wanted to mention here. And so they -- they waited
17 probably a good month, I would say, three weeks or so.

18 Linda's team -- we were working on the issues.
19 Again, it takes time to do an independent analysis and
20 engage the right technical skills and, you know, working 07:19
21 with the folks who are on-site actually watching the
22 canister inspections, looking at the data that was
23 collected, verifying its veracity, et cetera, et cetera,
24 et cetera, then getting it in the hands of the technical
25 experts to do the assessments and then the legal folks. 07:19

1 So you -- you get the idea. We -- Edison didn't -- by 07:19
2 all rights under regulations could have began moving
3 fuel well before they -- they didn't have to wait for
4 our permission, but they did anyway. So I just want to
5 give them a little bit of credit. 07:20

6 Now, I will tell you in our inspection report we
7 will again -- I'm going to say it again -- we will
8 capture for the record and your public scrutiny the
9 basis for why we believe that Edison's evaluations were
10 appropriate. And therefore, we were able to make the 07:20
11 announcement that we did a couple of weeks ago and then
12 summarized through the webinar by Linda on Monday about
13 why we came out where we did.

14 So I'm going to just ask Linda to briefly,
15 briefly summarize for those who weren't on the webinar. 07:20

16 MS. HOWELL: Okay. When we were here with you last,
17 in March, we told you that we had identified a number
18 of weaknesses in the corrective actions that Southern
19 California Edison proposed.

20 Now I'm going to focus on the licensee, Southern 07:20
21 California Edison.

22 At that time Southern Cal Edison had already
23 completed all of their corrective actions in response to
24 the root causes that were identified for the August 3rd
25 event -- happy to answer questions about what those 07:21

1 causes were while we're here with you tonight. They had 07:21
2 also taken action for the weaknesses we observed. And
3 those weakness involved inadequate procedures, not
4 addressing all of the causal factors that the NRC
5 thought were important that had in some way or manner 07:21
6 contributed to the event. There were equipment issues
7 and procurement and testing prior to use -- although the
8 equipment was never even used to move or lift fuel. And
9 then there were some seismic issues that they had to
10 correct. So just a high-level summary. 07:21

11 What we did tell you that night is that, as
12 Scott just mentioned, that Southern California Edison
13 had come up with a new approach to perhaps address this
14 scratching issue.

15 Now, we first started talking with Southern 07:21
16 California Edison back in November of 2018 about the
17 potential for scratching. I think Tom Palmisano talked
18 about it during our pre-decisional enforcement
19 conference in January. There were many, many rounds of
20 discussion about how could you adequately or 07:22
21 appropriately address the impact of scratching, it's
22 potential for, you know, any future action with the
23 canisters. And Tom, Al Bates, and Doug and I have had
24 many conversations about that.

25 Ultimately what Southern California Edison ended 07:22

1 up doing -- and they did it and -- to their credit, in a 07:22
2 very accelerated way -- they did these institute visual
3 assessments using robotics and three dimensional video
4 imaging. It goes down to a very, very small depth. To
5 be able, as Tom said earlier, visualize or image the 07:22
6 majority of the surface of the canisters. And we're
7 looking at canisters that had already been downloaded.
8 So you had the opportunity to see what the effects were
9 from impact between the canister and -- it's actually
10 more likely the seismic restraints on the inside of the 07:22
11 storage vault.

12 We challenged Southern California Edison -- and
13 they do have data out on their web page. I think it's
14 also the white paper that's on the CEP web page, we saw
15 links to it in all the media outlets. 07:23

16 But the one thing that I really want to make
17 clear is that our challenge to Southern California
18 Edison was not to just look at what you've observed from
19 downloading, but we want you to take a look at what
20 might happen in the future when you withdraw the 07:23
21 canisters. And let's take it to the most conservative
22 point. I'm going to ask you to look at what the impact
23 would be if you had overlay of a scratch that occurred
24 during insertion with a scratch that occurs during
25 withdrawal. 07:23

1 Then on top of that there is -- there are 07:23
2 allowable flaws during the application, and they could
3 also occur during handling prior to actually downloading
4 the canister. And we asked them take a look at what
5 happens if those two scratch models are overlaid over 07:23
6 topical flaws. So it was the most conservative set of
7 assumptions that we could ask them to address in trying
8 to look at the impact of incidental contact between the
9 canister and the storage vaults during the operations,
10 the whole life cycle of the use of the MPC. And it did 07:24
11 that.

12 The video imaging helped get real physical data
13 that was very useful to us. They did a statical
14 analysis to see what those -- the additive impacts would
15 be. And their results did come up within the allowable 07:24
16 ASME Code limits.

17 Now, for this particular certificate of
18 compliance -- I know we've had questions about various
19 sections, it's Section 3 of the ASME Code that is
20 referenced in the technical specifications associated 07:24
21 with the licensing document. We had an inspector there
22 who was side by side with GE, the Southern California
23 Edison contractor, looking at this visual data being
24 accumulated. So that -- that person, that inspector,
25 could come back and be prepared when we actually got the 07:24

1 written report to say, "Yeah, those are the same numbers 07:25
2 that I saw when I was on-site."

3 We also took a subject matter expert in
4 statistics who's an NRC employee, and we asked that
5 person to review the analysis that Southern California 07:25
6 Edison submitted to us. And then he went out and
7 performed additional modeling to see if the results that
8 Southern California Edison and its contractor came up
9 with reasonably bounded the maximum scratch depth. And
10 the answer to that, we concluded, was yes, it did. And 07:25
11 with that data, that was what provided the basis for our
12 actual approving them to resume fuel loading -- or fuel
13 transfer operations.

14 Now, moving forward, what we'll be doing, Doug
15 mentioned he's already on notice that we're going to be 07:25
16 doing unannounced inspections. We will be there when
17 they resume canister loading. Actually, we have a team
18 of inspectors on site this week, and they're actually
19 observing some of the training that's being done with
20 the Holtec staff. So we'll have a heightened level of 07:25
21 oversight.

22 Our commitment -- and I gave it on Monday during
23 the webinar, I said, "We will carve out periods of time.
24 We'll then produce formal inspection reports, put those
25 in the public docket so that you can have an opportunity 07:26

1 to take a look at activities as they are ongoing with 07:26
2 this long, drawn out fuel loading campaign."

3 I think that was pretty much that.

4 DR. VICTOR: Great.

5 MR. MORRIS: I think by my count there are eight NRC 07:26
6 employees in the area right now.

7 MS. HOWELL: Yes.

8 MR. MORRIS: I -- just a couple of things quickly
9 before I wrap.

10 I just wanted to mention -- so the NRC is 07:26
11 obviously the regulator. We license, we provide
12 oversight, we do enforcement, among other things. But
13 ultimately it's the licensee's responsibility to be safe
14 and to operate safely. It's the licensee's

15 responsibility to operate and maintain their facilities 07:26
16 under -- and activities under the NRC license they --
17 and so that -- and we -- we provide reasonable assurance
18 that that's happening by performing inspections. Right?

19 And so I think it's -- that doesn't mean it's
20 continuous. It means it's a sampling process. And 07:27
21 so -- but it's a smart sample, and it's based on
22 spending -- getting the biggest bang for our inspection
23 buck. So we're going to spend -- we're going to invest
24 a lot of inspection resources during the times that are
25 most important and critical. And that's exactly what 07:27

1 we're going to do through inspections going forward. 07:27

2 With that, I know we're short on time. So --

3 DR. VICTOR: Thank you.

4 Make sure we have time for some questions.

5 Ted Quinn? 07:27

6 MR. QUINN: Okay. Very quickly for Scott and Linda.

7 Tom mentioned tonight that Edison's management

8 program that Edison was implementing as part of the

9 industry, a program from the industry side, what is NRC
10 micromanaging [sic] -- NRC does, aging lessons learned 07:27

11 for operating a fleet? What do you -- can you describe

12 at a future time -- because we don't have time today --

13 what is the aging management program that NRC is

14 independently validating so that it's validating what

15 the industry is doing to have NRC acceptance? 07:28

16 MS. HOWELL: Good question, Ted.

17 As tom mentioned, when the certificates of

18 compliance come up for renewal, and that's -- you know,

19 so we could go back and take a look at them as though

20 they were a new license again, and then they can be 07:28

21 extended for a period of use. That's when aging

22 management programs are required to be put into place.

23 So we review these as part of that renewal. Then we

24 also have inspectors out in the field doing their

25 independent sampling to see how effective the aging 07:28

1 management programs are. 07:28

2 There are only a few sites right now that
3 actually have active aging management programs in place.

4 And that's just because it is a new requirement done
5 under a particular rule-making. So it's coming up in 07:28
6 stages.

7 What Southern California -- so Tom talked about
8 the new home system [sic]. What southern California has
9 to also agreed to -- they're not calling it aging
10 management; they're calling it inspection and then 07:29
11 monitoring, I think.

12 UNKNOWN SPEAKER: Maintenance.

13 MS. HOWELL: They're going to be, in essence, be
14 viewing the same thing for the Holtec system.

15 And so we will be evaluating the results of 07:29
16 those programs for both ISFSI systems.

17 MR. QUINN: Including levels of degradation?

18 MS. HOWELL: Well, yes. They focus on corrosion,
19 Ted, and -- which that is, you know, what leads to
20 degradation. But yes, we'll be evaluating that. 07:29

21 DR. VICTOR: Dan Stetson?

22 MR. STETSON: Based on what you've learned through
23 this whole process, are you changing your processes,
24 your inspections, your regulations across the country
25 for some of the other sites that fall under your 07:29

1 jurisdiction? 07:29

2 MS. HOWELL: Yeah, there are actually a good couple
3 of things going on, Dan. We're going to be doing a
4 lessons learned for the San Onofre experience
5 specifically. And I and my staff will be working on 07:29
6 that in the upcoming weeks. That will feed into a
7 larger overall assessment of the inspection oversight
8 program for dry fuel storage.

9 I think many of you here know that the Nuclear
10 Energy Institute asked us to do a full overhaul of the 07:30
11 reactor oversight process. One item in that was dry
12 fuel storage programs. We've carved that out
13 separately. We actually have an active working group
14 composed of subject matter experts throughout the
15 agency. One of our former senior executives is actually 07:30
16 leading that effort. We're going to be taking a look at
17 how we look at -- from an inspection perspective --
18 development of an ISFSI program construction and then
19 long-term operations. And I expect there will be a
20 number of changes. 07:30

21 MR. MORRIS: There will be.

22 And then it's a great question. And I just
23 would add that the -- in terms of lessons learned, I was
24 actually invited by the Holtec users group to speak at
25 their conference a month ago. And I took that 07:30

1 opportunity, because I wanted to share with them our 07:31
2 experiences. You know, the NRC's a learning
3 organization. Times are changing. Technology's
4 changing. So we're learning along with it. And so we
5 are absolutely doing what you're suggesting. And I -- 07:31
6 we're committed to, you know, continue to learn and make
7 it better as we go forward.

8 DR. VICTOR: Before we take a break, I want to make
9 one brief comment and ask a question.

10 The comment is that it would be great as part of 07:31
11 this fresh look at the construction and management of
12 ISFSIs over the long-term to help the public also
13 understand what that looks like as spent fuel from
14 ISFSIs to interim storage. It doesn't seem like it's
15 going to be different. But people need to understand 07:31
16 what that looks like and what the continuation of the
17 oversight would be.

18 MS. HOWELL: And that is a good point.

19 There actually are elements of what we've seen
20 with the Southern California Edison experience that are 07:31
21 being factored into the review of the Holtec submittal
22 for licensing of its consolidated interim storage
23 facility.

24 DR. VICTOR: And the question is: A very large
25 number of the issues that we've been dealing with 07:32

1 learning about in the last few years are statistical, 07:32
2 not deterministic. So they're the odds that a scratch
3 is deeper than X.

4 Are you -- is the statistical analysis that both
5 Holtec and Edison did along with your own independent 07:32
6 statistical analysis, is that going to be available to
7 the public so people can understand something around the
8 confidence intervals?

9 MS. HOWELL: I don't know what Southern California
10 Edison plans to put out. 07:32

11 Ours will not be available in an enormously
12 detailed fashion because it's run on computer software
13 models which, you know, aren't necessarily captured. We
14 will explain how we arrived at what we did.

15 MR. MORRIS: The assumptions that went into it -- 07:32

16 MS. HOWELL: Yeah.

17 MR. MORRIS: So to a competence -- competence
18 levels, all that.

19 DR. VICTOR: So it would be great to understand, not
20 just the assumptions but crucially the competence 07:33
21 intervals and their robustness against different --

22 MR. MORRIS: Yeah, we'll take that up.

23 MR. BAUDER: Just not to get too technical, we
24 did -- we looked for a 95 percent competence interval.

25 And the NRC reviewed our analysis based on that. 07:33

1 I'll work with Tom, and we'll take a look at 07:33
2 what we put on the community website, you know,
3 statistically, because it's -- the biggest thing was
4 getting into the field, doing the actually physical
5 look. And then once we did a look, understanding sample 07:33
6 size. And actually the NRC had some feedback for us on
7 sample size. So we grew the sample size. And we can
8 talk about that too.

9 But the -- that is the biggest thing. And then
10 the competence intervals, it's important to know that 07:33
11 the sample size was correct.

12 DR. VICTOR: Exactly. And I think some people are
13 going to be interested in knowing whether -- when to
14 make in the future we have competency on two-sigma,
15 which is 95 percent. 07:33

16 MR. BAUDER: Yeah.

17 DR. VICTOR: But that would be very helpful. Okay.

18 So I want to -- before we go to a break, I want
19 to just mention that the slides that were posted tonight
20 include an appendix that has a page of acronyms, a page 07:34
21 that keeps on growing. So it's one page right now in
22 print that you need a magnifying glass to see.

23 And then there's also a copy of all the slides
24 that were used by Edison in their briefing --
25 Congressional briefing at the plant on the 29th of May 07:34

1 led by Congressman Levin. 07:34

2 So if anyone wants to see -- we've asked to make
3 sure that anything that's shared is shared completely in
4 the community. And all that is now posted on the
5 website as an appendix to today's presentation. 07:34

6 We are going to take a five-minute break. And
7 then we're going to go into the public comment period.
8 If you want to make a comment, please fill out a card
9 and we'll get on that in five minutes.

10 Thank you. 07:34

11 (A recess is taken.)

12 DR. VICTOR: We're going to get started here.
13 First Madge Torres and then Ray Lutz.
14 So, Madge, why don't work your way to the front
15 here? And Ray Lutz, be ready to work your way to the 07:43
16 front.

17 Thank you very much.
18 Madge Torres, the floor is yours.
19 Thank you very much.
20 Madge Torres and then Ray Lutz. 07:44

21 MS. TORRES: All right. My name is Madge Torres.
22 And I'm with the Citizens' Oversight.
23 And I've wondered why is it that Southern
24 California Edison has chosen the most flimsy cask --
25 canister to store nuclear waste when it's so dangerous. 07:44

1 And then I thought, like, what -- what -- like why 07:44
2 wouldn't they choose the best, like they did, for
3 example, at Fukushima, so that we could be safe? After
4 all, we're paying for it. We've been paying for it
5 since they built the nuclear power plant. It's on our 07:45
6 bill. And -- and so why is it that they aren't doing
7 what we would want? We would want our property and our
8 children to be -- to be cared for in the safest possible
9 manner.

10 And then I realized that Southern California 07:45
11 Edison is planning to -- and it was kind of alluded to
12 tonight by one of the speakers -- they're -- they're
13 planning on giving the responsibility to someone else.
14 So they're just making sure that there's enough money
15 left in the money we've already paid so they can get the 07:45
16 best price for the nuclear waste that they're going to
17 sell to another company, whether it be Holtec or another
18 consolidated interim storage company. And so the less
19 money they spend now, the more they can offer to
20 somebody to take it off their hands and the more profit 07:46
21 the company that will eventually purchase it will --
22 will be able to anticipate.

23 And when they -- when the nuclear industry
24 started, I don't think it was determined that it would
25 be a profitable -- that profit could come before safety. 07:46

1 They -- the idea was we would pay for safety and we 07:46
2 would have it. And we're -- we're not getting it. And
3 I'm just saddened that profit is the determining factor
4 in things like -- like what canister is chosen or who's
5 in charge of moving the nuclear waste. Clearly Holtec 07:47
6 didn't care or they wouldn't have had the incident that
7 occurred on August 3rd.

8 And if I had a babysitter that was caring for my
9 child and they were taking a nap or going for a swim or
10 going out sunbathing when they were supposed to be 07:47
11 watching my child, I would get rid of them. I wouldn't
12 continue to hire them, even if they said, "Oh, I'm going
13 to start doing a good job now." And to congratulate
14 Southern California Edison for not starting up, moving
15 the -- whatever. It was like, "Yeah, they waited a 07:47
16 month to tell us, but that was pretty good, that they
17 told us anyway." That's silly. They -- this is the
18 pattern with them. They -- they said they were
19 exchanging like for like on the nuclear power generator
20 when they rebuilt it. And it was lie -- 07:47

21 DR. VICTOR: Thank you.

22 MS. TORRES: -- they took out the central core.

23 DR. VICTOR: Thank you very much for your comments.

24 Next is Ray Lutz and then Donna Gilmore.

25 MR. LUTZ: Thank you. Thank you. 07:48

1 didn't happen. That's the concern. 07:49

2 Now, the old saying is: When you're not in the
3 kitchen, you're not going to break any dishes, implying
4 you might break something when you're in there. Well,
5 they almost dropped this, but they didn't -- you're not 07:49
6 supposed to be dishonest about it. And this sort of
7 dishonesty is the real problem we need to get at. You
8 should a letter to SCE about their dishonesty here.
9 They're in charge. Don't send it to Holtec.

10 With all the review of this situation, the 07:49
11 design was not reviewed. I had complained about this
12 already. Why wasn't that one of the elements on the
13 chart from Southern California Edison? They put down
14 all the procedures and so forth, but they didn't review
15 the design. 07:50

16 We hear about Holtec has all this wealth of
17 experience. Now they're sure that they can go on for
18 another 40 years. But after only 29 cans, the design
19 fails. It failed because it allowed this can to be
20 become lodged. That's a failure of design. Yet nothing 07:50
21 was said about the design. Still NRC did not review the
22 design. They decided it was just procedures. It was
23 okay to have that ring there so it could get caught on.
24 How are we going to fix that? Let's have a whole bunch
25 of people -- all these critiquers, new cameras and all 07:50

1 this. They couldn't have just changed the design so 07:50
2 that it wouldn't get caught on that ring? Maybe that
3 mating device could be modified. No one talks about
4 this.

5 Now, the secret lessons learned and the secret 07:50
6 list that the nuclear industry keeps about all their
7 near misses and near catastrophes -- I know they keep
8 these. They have a special little group that gets
9 together and they share this information, but it does
10 not become public. 07:51

11 We have Holtec keeping a list of change
12 requests, and it wasn't reviewed by SCE. Where is this
13 list of all the changes that Holtec was not
14 communicating to SCE? And where is all the list -- and
15 we just mentioned that was good for you guys to come up 07:51
16 with that. Where -- where is the other information
17 that's being traded amongst these various players in the
18 nuclear industry? Usually they don't share that.

19 So let's look at the design. Let's get these
20 things taken care of. Thank you. 07:51

21 DR. VICTOR: Thank you very much for your comment.

22 Next is Donna Gilmore, then Torgen Johnson.

23 Donna Gilmore, the floors is yours.

24 MS. GILMORE: Okay. This is Donna Gilmore,

25 San Onofre Safety. 07:51

1 I would like to see the safety analysis report 07:51
2 of the gouging issue and the -- and evidence to go with
3 it. I don't know that it exists, the -- the root cause,
4 which as a systems analyst, I know that if you just
5 solve the symptom, you're not going to solve the 07:52
6 problem. And the root cause is the fact that this is a
7 poorly engineered system that unavoidably, because of a
8 Tarzan-like downloading system [sic] will scratch --
9 will gouge the walls of the canister the entire length.
10 This is an unacceptable system. You wouldn't load a 07:52
11 bomb this way, as it's playing Tarzan [sic] down in the
12 hole. These are -- this 37 fuel assemblies, this is
13 serious. This system should be rejected by Edison, and
14 they should change to a thick-wall cask system so you're
15 not worried about scratches and gouges. It's 07:52
16 unacceptable.

17 So I would like one of the questions, David and
18 Dan, when you go back is to ask for the written systems
19 analysis that includes the root cause of the download.

20 And microscopic cracking is enough to make these 07:53
21 canisters fail. No camera can find those kind of
22 cracks. Once cracks start in stainless steel, they
23 continuing to grow through the wall. And these are
24 pressure vessels. So it doesn't necessarily need to
25 grow all the way through before it will exceed the 07:53

1 pressure standards. 07:53

2 And Tom said that these comply with ASME Codes.

3 If -- we want to have more faith in system. Edison

4 should demand that any container they uses is ASME N3

5 certified. That's nuclear pressure vessel codes, 07:53

6 minimum standards. And right now, I know Sample Camp

7 [sic] that makes the Casco, they have this certificate.

8 So there are better systems there.

9 It's time to say -- as Tom Isaacs said in that

10 private meeting we had a few days ago, "It's time to 07:53

11 stop, take a pause and reevaluate." From this point

12 forward, we should stop and go back out to bid for

13 better -- we deserve the best here in California. We

14 deserve the best in the country. Everybody deserves the

15 best system. New Mexico deserves the best system, if 07:54

16 they ever get anything. They don't deserve cracking

17 canisters.

18 And do people know that the plan is that if a

19 canister arrives leaking in New Mexico or Texas, the

20 plan is to return to sender? And for five years we've 07:54

21 been asking Tom Palmisano, "What's the plan if you have

22 to replace a canister?" And you, again, got a runaround

23 answer, didn't give you a straight answer. Because

24 they -- their plan is just spent fuel pools and to not

25 build a hot cell. Those are the only two options. And 07:54

1 you can verify that those are the only two options with 07:54
2 the NRC.

3 And this idea of you can Russian doll this, you
4 got a canister that requires convection cooling. You
5 don't close that up; you don't take a leaking canister 07:54
6 and close it up in a sealed container and expect the
7 cooling system to work. It's Fantasyland. And the NRC
8 has never approved such an overpath. So you're getting
9 smoke --

10 DR. VICTOR: Thank you -- 07:55

11 MS. GILMORE: -- and mirrors.

12 DR. VICTOR: -- thank you very much for your
13 comment.

14 MS. GILMORE: And if anybody would like to meet
15 later or have an education session, just contact me or 07:55
16 go to San Onofre Safety and we can fill you in on a
17 whole lot more information.

18 DR. VICTOR: Thank you very much.

19 I just want to clarify: Did you say that
20 Tom Isaacs said that they should rebid this? 07:55

21 MS. GILMORE: Yeah. In a private meeting he says
22 if -- you know, it's good practice to stop and reassess
23 and reevaluate, you know, because it's the systems that
24 were made at that point in time had certain
25 assumptions, and obviously no one expected what 07:55

1 happened to happen. 07:55

2 This isn't the worker's fault. This is a
3 management --

4 DR. VICTOR: Understood.

5 I just want to understand what you're saying 07:55
6 Tom Isaacs --

7 MS. GILMORE: Yes.

8 DR. VICTOR: -- said.

9 MS. GILMORE: Yeah.

10 DR. VICTOR: Okay. Torgen Johnson and then 07:55
11 Gary Headrick.

12 MR. JOHNSON: There are a lot of similarities here
13 tonight between the NRC and the FAA and the
14 relationship to the public.

15 As the public keeps appealing to the NRC, our 07:56
16 sole safety regulator, to pull the nose up and avoid a
17 disaster, it seems the NRC keeps -- approves Holtec's
18 defectively engineered dry storage system, thus pointing
19 the public safety nose back down towards the ground.

20 We've had this relationship with the steam 07:56
21 generator debacle in 2013 with the NRC and Edison, and
22 we're going through this again.

23 The public has no say and no control, the
24 potential regional impacts to our families and our homes
25 from a nuclear waste disaster of San Onofre due to loss 07:56

1 of containment. This is totally unacceptable. 07:56

2 Containment. Containment. Containment is and has
3 always been a critical issue with vision technology
4 since this industry's inception. Failed containment of
5 the badly damaged spent fuel assemblies that are stored 07:56
6 inside of these canisters that are now damaged and
7 resulting in environmental contamination is a violation
8 of every surrounding communities' human rights. This is
9 how the Japanese Association of Lawyers is defining
10 these types of accidents. 07:57

11 In a Congressional briefing a few weeks ago it
12 was shared with the public that Holtec's canisters
13 contain 124,000 Hiroshima bomb's worth of Cesium 137
14 that could be volutized and leave the site of the gas.
15 That's 127,000 Hiroshima bomb's worth of radiation and 07:57
16 defective thin canisters with no viable Plan B in the
17 event of a breached canister -- that's almost happened
18 twice last summer. And now the NRC's 7248 process
19 allows this entity to move the safety -- the public
20 safety goal posts. Totally outrageous. I can't believe 07:57
21 you have a straight face when you're telling us this.

22 SCE says it's satisfied with Holtec's analysis
23 of damage to the canisters. So why are cameras invented
24 today to detect predictable cracks that were understood
25 by metallurgists decades ago? It's like showing up to a 07:57

1 house fire with smoke detectors. That fingernail-sized 07:58
2 lens on your inspection camera needs to inspect the
3 microscopic cracks across approximately 44,000 square
4 inches of exterior surface per canister on
5 124 canisters. How is that supposed to be done on a 07:58
6 regular basis?

7 Scott Morris, you said it's the responsibility
8 of the utility to run its facility safely, but you
9 totally ignore the NRC's own records that SCE has had
10 the worst safety record of all operating reactors in the 07:58
11 U.S. That's why we shut this thing down in the first
12 place.

13 Scratching a canister is not a moot issue. It's
14 a subscopic score or a scratch on a sheet of glass
15 intention is the way that you weaken and cause that 07:58
16 glass to fail.

17 These canister are pressurized. I showed you an
18 image of this once in a previous meeting. Chlorine
19 induced stress corrosion cracking is not a moot issue.

20 And Jearl Strickland, you said procedures, 07:59
21 training and craft is Holtec's answer to correcting
22 crucial engineering defects. This is defective
23 engineering, like Takata airbags in -- implying that
24 more training will fix the problem is like telling
25 drivers with Takata airbags that maybe we need to train 07:59

1 you with CPR and first-aid to close the bleeding wounds 07:59
2 after your Takata airbag fails on you. Those are safety
3 systems just like our dry canister system are safety.
4 DR. VICTOR: Thank you very much.
5 MR. JOHNSON: The public has zero trust in this -- 07:59
6 DR. VICTOR: Torgen --
7 MR. JOHNSON: -- waste storage --
8 DR. VICTOR: -- we have a whole bunch of people --
9 MR. JOHNSON: Hang on a second.
10 I'm spending my whole evening here. I want more 07:59
11 than just a couple of minutes.
12 DR. VICTOR: We've got a lot of people on the
13 list --
14 MR. JOHNSON: I understand that. I want to say
15 something here. 07:59
16 It's unthinkable that with so many glaring
17 problems with Holtec and the current storage waste plan
18 that Southern California Edison would under contractual
19 agreement with Holtec International.
20 This high-storage -- 07:59
21 DR. VICTOR: Could you let other people speak --
22 MR. JOHNSON: -- needs to be recalled --
23 UNKNOWN SPEAKER: No. Listen.
24 DR. VICTOR: We're listening.
25 So thank you very much for your comment. 07:59

1 MR. JOHNSON: This is engineering defects -- 07:59

2 DR. VICTOR: So thank you --

3 MR. JOHNSON: -- not a training issue.

4 DR. VICTOR: -- very much for your comments.

5 Please do share you comments with us by email as 08:00

6 well.

7 Next is -- please, folks.

8 Next is Gary Headrick and then Kyle Krahel.

9 MR. HEADRICK: Good evening. My name's

10 Gary Headrick representing San Clemente Green. 08:00

11 Several -- almost 5,000 concerned citizens who are

12 following this ever since I got involved in 2010.

13 Tonight's theme seems to be lessons learned.

14 And I'm getting the feeling like we're the guinea pigs.

15 The NRC -- these lessons should not have had to have 08:00

16 been learned. Many of these situations should not have

17 happened in the first place.

18 And Holtec -- you know, you're new to this. I'm

19 curious to know if you were surprised to find so many

20 deficiencies when you got involved in this, things that 08:00

21 should -- even to the general public it's obvious

22 procedures that should have been in place before they

23 ever started.

24 Tom Isaacs said the SCE expert panel questioned

25 the selection of Holtec recently. And the letter from 08:00

1 the CEP echoed the same concerns about Holtec, they're 08:01
2 currently under investigation for lying about being
3 barred from work. Kris Singh lied to us about not being
4 fined \$2 million when it was, you know --

5 UNKNOWN SPEAKER: Administrative -- 08:01

6 THE WITNESS: -- forget -- administration fee they
7 call it.

8 But why are we using them? We need to really
9 listen to the people that are warning us about problems
10 that are coming from Holtec. 08:01

11 Holtec requested immediate need to restart the
12 downloading process out of concern for the stranded
13 Canister Number 30. I'd like to know: What is the
14 status of that canister? What's the heat load? What
15 are the radiation levels? And what kind of solution is 08:01
16 that if we actually need to store a canister that is
17 stranded or one that's actually been damaged? How long
18 can we safely store a canister on-site before we have to
19 be concerned about it failing? Is there a safe way to
20 handle a stranded canister, one that's established? Is 08:02
21 the NRC leaving the public unprotected?

22 On Friday it's the sixth anniversary for the
23 official shutdown when Edison announced they were no
24 longer going to continue. I just want to bring that up
25 to lessons learned. Doug Bauder was in charge while 08:02

1 25 percent of the employees feared retaliation for 08:02
2 reporting safety violations. He was also a strong
3 proponent for restarting a defective reactor and run it
4 for five months and see what happens, putting us all in
5 danger. And fortunately, he was not listened to. 08:02
6 Edison wisely chose to decommission.

7 So I'm sorry that there's not someone I feel
8 more confident in this role. I don't think he has a
9 very good track record. And I think that of all of the
10 lessons learned tonight, that's the one. 08:02

11 DR. VICTOR: Thank you very much for you comment.

12 Next is Kyle Krahel and then Mandy Sackett.

13 MR. KRAHEL: Good evening. Hello. My name is
14 Kyle --

15 DR. VICTOR: And you spell your last name 08:03
16 K-R-A-H-E-L?

17 MR. KRAHEL: Kyle Krahel. I work for
18 Congressman Levin.

19 I want to share these words from
20 Congressman Levin: 08:03

21 "The safety of my constituents is my top
22 priority. And there are many lingering questions about
23 the safety of spent nuclear fuel loading at SONGS that
24 have not been fully addressed. I call for a full-time
25 NRC inspector at the facility because Southern 08:03

1 California Edison proved after the near miss canister 08:03
2 incident that we need a higher level of transparency,
3 accountability and oversight. Until a full-time NRC
4 inspector is in place, I will remain strongly concerned
5 about the loading of spent nuclear fuel at this site. 08:03

6 "Furthermore, it is troubling that NRC's
7 decision relied on data provided by Edison, a company
8 that does have an incentive to resume loading as quickly
9 as possible. The NRC's decision-making process requires
10 a greater degree of independence to best serve the 08:03
11 public interest."

12 Unfortunately, the Congressman has not received
13 a response from the NRC about this letter requesting a
14 full-time inspector. And that is despite the NRC having
15 already described their anticipated inspection regime at 08:04
16 SONGS after they've decided to allow the resumption of
17 fuel loading. And furthermore, Edison leadership has
18 actually expressed their openness to a full-time
19 inspector. So we hope that they will take this
20 important step for the safety at SONGS. 08:04

21 On a separate note, I can report that funding to
22 expedite the removal of spent fuel from SONGS through
23 consolidated interim storage will actually be on the
24 House floor next week.

25 Finally, Congressman Levin has introduced HR2995 08:04

1 which would prioritize the acceptance of spent nuclear 08:04
2 fuel from plants that have a high earthquake hazard,
3 large population and decommissioning status, all of
4 which would apply to SONGS.

5 Thank you. 08:04

6 DR. VICTOR: Thank you very much.

7 And just thank you also for your model of
8 punctuality.

9 Anyone who's reading their statements, if you
10 would like to send us the statements as well, we're 08:04
11 happy to make those fully in the record.

12 Mandy Sackett and then Amy Foo.

13 ms. sackett: Thank you. Mandy Sackett with
14 Surfrider Foundation.

15 In light of recent resumption of fuel transfer 08:05
16 operations, we ask that Edison go above and beyond NRC
17 requirements to assure that this coastal community and
18 our coastline remain safe during the decommissioning
19 process.

20 At this point the failures to provide thorough 08:05
21 training and overseeing employees is alarming. We hope
22 that the proposed corrective actions are truly thorough
23 and comprehensive to elevate the importance and
24 assurance of safety while the waste remains on site.

25 We also ask that Edison employ the precautionary 08:05

1 principle and develop robust and readily deployable 08:05
2 plans for potential on-site events, including the loss
3 of canister integrity, canister inundation from rain
4 storms, ground water level rise or wave overtopping and
5 any accidental dropping or mishandling. 08:05

6 Additionally, we want to highlight that
7 Surfrider weighed in on the final Environmental Impact
8 Report and lease agreement on the Southern California --
9 with Southern California Edison and State Lands
10 Commission for the decommissioning of SONGS. And we 08:06
11 continue to demand that Edison not dismantle the cooling
12 system. Surfrider is calling for there to be a readily
13 available on-site method of transferring waste for
14 fixing a canister should a canister's integrity be
15 compromised, such as a retaining pool, developing a hot 08:06
16 cell or other preapproved method by the canister
17 manufacturer and the NRC.

18 Unfortunately, this ask was dismissed so far by
19 Lands Commission and Edison as unnecessary. And we hope
20 you'll reconsider. And we also hope that Edison will 08:06
21 take these requests seriously. We remain concerned that
22 a readily available method is a gaping oversight here.

23 So thank you for your consideration.

24 DR. VICTOR: Thank you for you comment.

25 Next is Amy Foo and then Christa Gostenhofer. 08:06

1 MS. FOO: Amy Foo, Surfrider Foundation. 08:06

2 One of Surfrider's top priorities in Southern

3 California is to ensure that the 3.6 million pounds of

4 spent nuclear waste at SONGS is safely relocated.

5 Surfrider is strongly opposed to permanent or long-term 08:07

6 storage of radioactive waste at SONGS due to its

7 proximity to the coastline, susceptibility to geological

8 instability, and location within a densely populated

9 area.

10 We are thankful to our Congressional 08:07

11 representatives, notably Representative Mike Levin for

12 elevating this issue as a Federal priority, which is the

13 only way we will get the waste removed from the

14 coastline in our lifetimes. Congressman Levin's newly

15 introduced bill, HR2995, puts SONGS first in line to 08:07

16 have its spent nuclear waste relocated. And Surfrider is

17 advocating for the waste to be moved as soon as possible

18 to a consent-based geologically stable permanent

19 lactation away from the coast.

20 Surfrider is honored to join the many 08:07

21 passionate, engaged community members on

22 Representative Levin's Congressional Task Force. We

23 hope that our collective efforts will result in

24 increased oversight of So Cal Edison and participating

25 Federal agencies, increased safety measures taken 08:08

1 on-site and ultimately safe transportation of the waste 08:08
2 off-site.

3 Surfrider recognizes that the waste needs to be
4 cooled on-site before it is moved, and we demand that
5 this is done as safely as possible. 08:08

6 We appreciate the additional oversight and
7 inspections provided by the NRC so far and request that
8 the NRC continue to maintain an on-site presence
9 throughout the duration of the fuel transfer process at
10 SONGS. 08:08

11 Thank you.

12 DR. VICTOR: Thank you for your comment.

13 Next is Christa Gostenhofer and then
14 Peter McBride.

15 MS. GOSTENHOFER: Hello. I just wanted to get a 08:08
16 sequence clear. I believe that Edison loaded
17 30 canisters. Canister 29 almost dropped. NRC came in
18 and did an inspection. And then the NRC discovered the
19 scrapes and gouges. And then we found out that
20 Holtec -- we found out that Holtec had in their final 08:09
21 safety analysis report that they said there would be no
22 scrapes and gouges. And so if Edison says that Holtec
23 can submit the 7248 -- and so I'm not sure how Edison
24 gets credit for loading 30 canisters before discovering
25 themselves that there was scraping and gouging on every 08:09

1 canister as they're being loaded. That's just one of 08:09
2 the little things of many that I wonder about.

3 I'm wondering if the NRC's report will be
4 including a technical analysis from a materials engineer
5 or somebody who can really look at the effect of these 08:09

6 scrapes and gouges. There's high burner fuel. Holtec
7 is loading really hot. This not just a cosmetic
8 problem. Repairs [sic] paid over \$4 million per
9 canister for the ISFSI and all the loading and
10 everything, \$4 million plus. And we're getting damaged 08:10
11 goods, which Holtec promised in their FSAR would have no
12 scrapes and gouges. So I think to just wipe that clear,
13 say, "Oh, we're just going to allow scrapes and gouges,"
14 I think is a little bit ridiculous.

15 I wonder how ASME considers these. I wonder if 08:10
16 they would do an analysis.

17 So I certainly hope there is going to be a
18 technical report on that from a technical expert, not a
19 camera and not a statistician -- statistician, whatever.

20 This is really particularly serious because 08:10
21 Edison -- I mean, Holtec has such aspirations. They
22 want to like take all the nuclear waste and take it all
23 to New Mexico.

24 And so we're going to be scraping these things
25 going in, coming out, down again, we're going to scrape 08:11

1 it again? You know, NRC hasn't even done the -- they're 08:11
2 still doing transport analysis of what the shaking and
3 rattling will do to the high burner fuel. There's so
4 many unanswered questions.

5 And I'm wondering why a lot of these incidents 08:11
6 aren't considered reportable events. I check the NRC
7 daily, the event report, and if someone leaves a door
8 unlocked, there's a report. So I don't understand why a
9 whole lot of these situations that have happened with
10 the Holtec system since it was started loading have not 08:11
11 been considered reportable so that the rest of the
12 country could be aware of what's going on with Holtec.

13 Thank you.

14 DR. VICTOR: Thank you very much for your comment.

15 Next is Peter McBride and then 08:11
16 Patricia Borshman.

17 Peter McBride, the floor is yours.

18 MR. MCBRIDE: I hope some folks are watching HBO's
19 Chernobyl. It's very informative because these are the
20 things we never heard about. We just heard somebody 08:12
21 screwed up in the control room. Much, much more
22 important than that. And what we're looking at in the
23 waste that they're dumping over there. And San Onofre
24 is much more than what happened at Chernobyl. The
25 potential is incredible. 08:12

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1 Nobody's talked about the half-life of the 08:12
2 nuclear waste that's there. Some of it goes quickly.
3 Some if it will go 24,000 years, the Plutonium 236,
4 24,000 years. And we're talking about canisters, little
5 tin cans that are going to hold it for 10 to 60 years. 08:12
6 It's ridiculous. And we're laying this on the beach,
7 right in the middle of everything. I -- I -- it's
8 incredible that we would do this.

9 Now, I'm going to be dead and gone, but I'm just
10 thinking about our children, what's going on, and for 08:12
11 the rest of -- some of you must be thinking a little bit
12 about that.

13 And no money is being provided by the Federal
14 government right now for any permeant storage. There's
15 nothing going on. Money's all been stopped. So here we 08:13
16 are. We're talking about interim storage maybe.

17 I wish that we could have somebody neutral at
18 the site observing what's going on -- not the NRC -- I
19 don't trust them, not really -- but a neutral informed
20 observer who could be on-site watching what's going on 08:13
21 and reporting to all of us what's actually happening.
22 This is incredibly dangerous material that's being
23 handled. This is what we should have going on there,
24 and I hope it will happen.

25 I walked over and I looked at the model over 08:13

1 here that you have of the canister, the plastic one. 08:13
2 The top of the lid, flat. I asked a guy over there,
3 "What is it that's used? How do they move it in and
4 out? What's going on? Why isn't it there?" He said,
5 "Well, it's some sort of eye bolt or something." He 08:14
6 wasn't even clear on. Then he moved away because he
7 didn't like that I was kind of getting upset. Boy, I
8 was getting upset.

9 But the point was they don't even give one of
10 the most essential aspects: How do you move this stuff 08:14
11 around? It's not represented there.

12 Really pretty canister, really nice model. But
13 it was incredible to me that nobody had taken the time
14 to say, "Well, that -- they're not going to do that.
15 That's too much trouble." No, it's not. Show me how 08:14
16 this is lifted in and out of there. How does this
17 happen? And it's not there for us to see. I still
18 don't understand what's going on.

19 And ten years in salt air by the ocean,
20 potential for all kinds of things to happen -- you know, 08:14
21 the earthquake fault there, the whole thing, and we've
22 got some kind of system for picking this thing up, maybe
23 if we have to in ten years. I'm -- I'm not sure. I
24 wish we could get that clarified as well.

25 Okay. Thank you. 08:14

1 DR. VICTOR: Thank you very much for your comments. 08:14
2 Patricia Borshman and then Jeff Steinmetz.
3 MS. BORSHMAN: Hello. My name is Patricia Borshman,
4 I'm a Citizens' Oversight.
5 I am -- started out with a question to ask: The 08:15
6 ASME Code, and what section is it that was applicable to
7 the issue of wall thinning over time during the service
8 life of a canister?
9 I recall when the CEP panel was first formed,
10 there was, you know, numerous, you know, documents at 08:15
11 that time. And I think Holtec design work was in its
12 infancy. So it was a long time ago, relatively. But I
13 recall there being sections where there were allowances
14 that penetrations from corrosion cracking, stress
15 corrosion cracking or other induced defects were -- 08:16
16 would be allowed to penetrate the thickness of a cask up
17 to 70 percent. So if we had a five-eighths inch thick
18 cask to start with when it's first installed, I -- I
19 think that was a real concern, to start with. But I --
20 I would ask for follow-up confirmation of what is -- is 08:16
21 it true that there is an ASME standard that applies to
22 wall thinning that allows penetrations to develop up to
23 70 percent of the thickness of the cask?
24 A lot of the earlier speakers have been -- you
25 know, brought up excellent issues. 08:16

1 I think that it is important that Edison apply 08:16
2 independent experts in addition to the experts that
3 you've already, you know, retained. And I -- I
4 appreciate there's been progress and improvement in the
5 work that's being done at San Onofre by Edison being a 08:17
6 little bit more self-critical than has been common in
7 the past. So I appreciate and I observe some
8 improvement.

9 I don't observe equal improvement in Holtec.
10 And I think that their history and practices in the past 08:17
11 have raised such substantial questions. Say, for
12 instance, Holtec was -- there was a contractor retained
13 at Diablo Canyon responsible for doing cask loading and
14 removing of spent fuel from their spent fuel pools to
15 dry cask. And I think it was like two or three years 08:17
16 ago there -- they made huge errors where there's very
17 precise diagrams for cask loading sequences. And, you
18 know, in the center, you know, there's supposed to be,
19 you know, conformance with a special design where spent
20 fuel is separated between old fuel and new fuel, and the 08:18
21 way that they did it at Diablo Canyon was gross, flawed
22 error that should have never happened in the first
23 place. That is an example of the level of quality work
24 that Holtec has done in the past. And I think it's a
25 really good example and a reason that I think the public 08:18

1 has good reason to have healthy skepticism. 08:18

2 DR. VICTOR: Thank you.

3 MS. BORSHMAN: Thank you very much.

4 DR. VICTOR: Thank you very much for comment.

5 Next is Jeff Steinmetz and then Ron Rodarte. 08:18

6 Jeff Steinmetz, the floor is yours.

7 MR. STEINMETZ: Good evening. My name is

8 Jeff Steinmetz. I'm a citizen, a resident of

9 San Clemente, California.

10 As I've stated before, I'm scared that it's not 08:18

11 really going to be safe to live in San Clemente because

12 the Nuclear Regulatory Commission and Southern

13 California Edison are not doing what they need to be

14 doing to make sure that we're safe.

15 This is an engineering issue. It is not a 08:19

16 training issue that Holtec and Southern California

17 Edison and the Nuclear Regulatory Commission would have

18 you believe. All the canisters are being scratched as

19 they go down. This is a design flaw. It is defective.

20 It should be rejected. 08:19

21 Tom, in your presentation you said that the

22 canisters are all built to ASME specifications. This is

23 a false statement. The canisters are pressure vessels,

24 and they do not have pressure relief valves. They do

25 not have an ASME stamp, and, you know, you've been told 08:19

1 they cannot get an ASME stamp. Yet you still 08:19
2 deliberately, again, mislead the audience here and your
3 fellow companion -- or excuse me, panel members.
4 Jearl Strickland is listed on the Holtec website
5 as being an advisory counsel person. He's not listed as 08:19
6 he currently introduced himself, as the executive
7 director at Diablo Canyon a few months ago. He stressed
8 he was not an employee of Holtec. Has that changed?
9 DR. VICTOR: We're going to answer the questions
10 after. So that question will get answered. 08:20
11 MR. STEINMETZ: I'd like the time added.
12 DR. VICTOR: You can have your 12 seconds back.
13 MR. STEINMETZ: Well, excuse me. Ask Holtec --
14 wait.
15 When you were there at Diablo Canyon, mistakes 08:20
16 happened with the loading of canisters. The NRC had to
17 grant you an exemption without knowing if the fuel
18 inside the canisters was damaged. Because, as we all
19 know, those canisters are not -- we can't inspect those,
20 you haven't opened them. So I frankly have no faith in 08:20
21 Mr. -- in Jearl being put in charge. He's proven
22 himself to have made mistakes in the past for which the
23 NRC then had to retroactively okay, even though that was
24 grossly irresponsible.
25 Why is the NRC not providing a root cause 08:21

1 analysis of the canisters being gouged? When are we 08:21
2 going to see a certified engineer analysis of this,
3 rather than a bunch of talk. Southern -- excuse me,
4 Southern California Edison, Holtec and the Nuclear
5 Regulatory Commission is long on talk. They are not 08:21
6 long on certified documents.

7 As far as the statistical analysis, anybody
8 who's taken a college statistical class knows that --
9 and is instructed that it's another way -- a creative
10 way of lying. You can ask any kind of different 08:21
11 questions and come up with the specific results that you
12 want. If they were really interested in providing
13 accurate information, they would have done -- used
14 physics. Physics that was used by the Samuel Lawrence
15 Foundation from a doctorate of physics, the teachers at 08:22
16 the same university as David Victor.

17 DR. VICTOR: Thank you very much for your comment.

18 Next is Ron Rodarte and then --

19 MR. STEINMETZ: This system --

20 DR. VICTOR: Sir. 08:22

21 MR. STEINMETZ: -- needs to be recalled.

22 DR. VICTOR: Point understood.

23 Ron Rodarte and then Mike Aguirre.

24 MR. RODARTE: Good evening. My name is Ron Rodarte,
25 San Clemente resident and member of the Orange County 08:22

1 Green Party. 08:22

2 I'd like to ask SCE to produce the reason why
3 they're not inspecting all of the cans that are the
4 vertical insertion cans, or a valid reason why this is
5 impossible. 08:23

6 Kind of going out of my -- what I wanted to say
7 here, but the path forward is granted by NRC with
8 statistical analysis based on human assumptions.
9 There's an availability to repeat the eight filmed
10 inspections five times more, whether it costs a little 08:23

11 bit more to clad the inspectors to prevent dosage or pay
12 the extra 150,000 per can to inspect them. What's the
13 reason they aren't inspected at a value proof that
14 they're not scratched or what the condition of the
15 scratches are? That's been dependent on mathematical 08:23
16 assumptions, which are statistics. There's lies,
17 there's damned lies, and then there's statisticians.
18 That's a famous phrase.

19 We can't depend upon assumption, even
20 mathematical ones, when the ability to do the inspection 08:23
21 was made clearly easy by Tom's statement today, "It's
22 relatively easy to pull the top and run the camera
23 down." Let's do it. And let's have them inspected
24 before the SCE demand to destroy the fuel pools is made
25 a moot point. We may find a can that has a scratch that 08:24

1 exceeds the limits. We don't know. We're depending 08:24
2 upon a 95 percent certification of assumption, which is
3 statistics.

4 So for that matter, just let's step back, as
5 many have said. 08:24

6 We have gotten into a position of I'd say the
7 fog of war in a sort of business way with this entire
8 nuclear canister predicament. We find ourselves so
9 installed in this that we don't want to step back and
10 say, "Maybe we should just step back, take a look and 08:25
11 see if we made a wrong move here." That would be the
12 prudent thing to do. A deer goes to the river and looks
13 around and nudges into the river before it may even
14 cross or do any drinking in the river. We should do
15 that, as in intelligent people and with a business 08:25
16 sense, avoid the fog of war, which is sometimes a
17 metaphor for business.

18 We don't have to make profits. We can save our
19 communities.

20 Thank you. 08:25

21 DR. VICTOR: Thank you for your comments.

22 Next is Mike Aguirre and then Maria Severson.

23 Mike Aguirre, the floor is yours.

24 MR. AGUIRRE: Coastal flooding and erosion hazards
25 are beyond the design capabilities of San Onofre. So 08:25

1 it will be underwater, and there will be erosion, and 08:25
2 we will be leaving that problem to the next generation.
3 The regulatory regime of the NRC does not really line
4 up with that.

5 Edison, because of that obvious reality, 08:26
6 promised to make a good faith effort to try to move the
7 waste somewhere else, and they've reneged on that.

8 Instead they have, single mindedly, tried to jam
9 canisters into the ground no matter what. And the
10 NRC's -- Scott -- has, right there, all the way helping 08:26
11 him.

12 Now, one of the things that we have done is we
13 have brought two lawsuits so far against the NRC under
14 the Freedom of Information Act. And we're trying to get
15 documents. We've got about 700 documents that -- 08:26
16 May 24th. And we're going through those documents. One
17 of the documents is a list of all the documents that the
18 NRC requested from Edison. I'm going to provide that to
19 your chair and ask that you get those documents.

20 All the things that these people are saying, 08:26
21 just oral, are all contradicted by the written record.
22 You read it. We in this society don't take anything at
23 face value. I'm inviting Scott and his co-counsel -- or
24 not co-counsel but counsel -- to come back here and to
25 submit to depositions under oath with the appropriate 08:27

1 records so we can get to the truth. That's the only way 08:27
2 we can get to the truth.

3 There is a growing consensus on feeling amongst
4 those of us who are in opposition to this insane concept
5 of putting 300 or 600,000 pounds of nuclear waste right 08:27
6 on the edge of the beach. We're against that. And
7 we're all sort of figuring out a way to find another
8 option. But we're not getting any help from the Nuclear
9 Regulatory Commission. We're not getting any help from
10 Southern California Edison. They still are using 08:27
11 Tom Palmisano. He's a nice guy, but he's completely
12 discredited because he lied, openly, bold-faced lied in
13 front of everybody. It's on the film. And he doesn't
14 have the integrity to resign. That's where we are.

15 Edison -- right now, Edison's in front of the 08:28
16 United States Supreme Court trying to change the pudency
17 rule because they have started fires. PG&E -- we hear
18 that Holtec has highered somebody from PG&E. PG&E is a
19 convicted felon. They're in bankruptcy. I mean, is
20 Holtec like completely tone deaf? 08:28

21 So let us come together -- and also, one last
22 thing, we need to consider removing Edison altogether
23 from being responsible for this waste to having somebody
24 who is more responsible appointed.

25 Thank you. 08:28

1 DR. VICTOR: Thank you for your comment. 08:28

2 Next is Maria Severson and then Steven Vogue.

3 MS. SEVERSON: Hello, my name is Maria Severson.

4 And my comments are largely directed to the regulator,

5 the Nuclear Regulatory Commission. 08:29

6 Its mission is to ensure adequate protection of

7 the public health and safety and to protect the

8 environment.

9 Now, there's been talk tonight of lessons

10 learned. Lessons learned. What are the lessons we have 08:29

11 learned? Southern California Edison first failed to

12 seek a license amendment when it installed the changed

13 design of its generator, and they failed. They then,

14 during the loading process with the canisters, the

15 design was changed with the help of Holtec, and there 08:29

16 was a shim -- the shim issue that those were breaking.

17 They didn't seek the NRC amendment or permission. What

18 did the NRC do in response? Nothing. The NRC did not

19 impose any sanctions.

20 Now we have the incident with the canister 08:29

21 downloading and the scratching. And the NRC comes here

22 tonight and commends them? Commends them. What are the

23 lessons learned?

24 Now, Ms. Howell had said normally downloading

25 takes place in a more contracted time period. But here 08:30

1 it's continuous because it's the decommissioning. So 08:30
2 then we have the -- and the NRC permitted that. Holtec
3 loves the decommissioning process. It's normally
4 where -- according to NRC, it would take ten years for
5 the fuel to cool down, but instead, Holtec is doing it 08:30
6 in a short time, the fast decommissioning. And why?
7 It's in the process of buying up retired or soon to be
8 retired nuclear plants. Oyster Creek in New Jersey,
9 Plymouth, Massachusetts, two more in New York. That's
10 all within the next two years. 08:30

11 Mr. Morris from the NRC promised this town hall
12 meeting. There's all this focus on the loading, the
13 loading, but we don't hear anything except statistical
14 analysis on what happens when it's unloading time.

15 We have several instances, even after the 08:30
16 Commission has agreed to allow the fast decommissioning.
17 But with each of these, what are the lessons learned?
18 Haste makes waste. And it's time to reevaluate whether
19 you allow the fast decommissioning to continue.

20 Thank you. 08:31

21 DR. VICTOR: Thank you for your comment.

22 Next is Steven Vogue and then Charles Langley.

23 MR. VOGUE: I think it's time for a little
24 introspection. I think if you were to have an outside
25 observer taking a look at this whole meeting today, 08:31

1 that they would listen to all of the people out here 08:31
2 and think that this Panel is really inept, they can't
3 trust them. I mean, you can tell from the comments
4 that have come through.

5 And my observation is that way back when the 08:31
6 steam tubes broke and -- that resulted in the
7 decommissioning, all the way to the canister being
8 dropped and getting screwed up, that there's been one
9 ineptitude after another.

10 And then we talk about lesson learned. Well, 08:32
11 what's going to be the next lesson learned?

12 There's an elephant in the room, according to my
13 observation. I've been taking a look after somebody at
14 the last March meeting came through, said, "These
15 canisters are made of stainless steel. They start 08:32
16 decomposing by electrolysis when they get hit by salt
17 water." I haven't heard much about that sort of a
18 thing. There's been talk all around it. There's a pad
19 at less than 150 feet from the beach is my
20 understanding. And if that's the case, there's salt 08:32
21 water. And if you ain't got decomposition of these
22 canisters as a consequence of salt water, which could
23 easily happen -- Fukushima didn't expect a tsunami, did
24 they? Another nuclear mistake. I think we're headed
25 for another one. 08:33

1 As one of the commenters said before me, "It's 08:33
2 going to be underwater before too long." We even have a
3 lot of scientists saying we're going to have rising
4 oceans. So what do you guys think about that? What the
5 hell are you going to do about that one? You can talk 08:33
6 your way all around it with all of the lessons learned,
7 with all the wonderful hindsight. But I would love to
8 see some foresight.

9 Thank you very much.

10 UNKNOWN SPEAKER: Really. 08:33

11 DR. VICTOR: Thank you for your comment.

12 Next is Charles Langly and then Lacey Johnson.

13 Let me just mention we're -- I think we're going
14 to get through the last couple of cards here.

15 The final card, Number 22, there's no name on 08:33
16 it. So if you were Number 22, when I call 22 if you
17 would tell us who you are, that would be great.

18 Charles Langley, the floor is yours.

19 MR. LANGLEY: Thank you.

20 I -- I would like to know what the temperature 08:34
21 is on Canister 30 in terms of what the external
22 temperature of that is and inside the transfer cask. I
23 understand it's been bundled up in a transfer cask for
24 ten months now. And the temperature readings are being
25 taken twice a day. But it would be great if we knew 08:34

1 what those temperatures were and if they're getting 08:34
2 higher and higher.

3 The other concern I have is about the Code of
4 Federal Regulations 7248 that Scott Morris mentioned
5 earlier. Because if I'm understanding Mr. Morris's 08:34
6 interpretation of that regulation, Southern California
7 Edison could start moving nuclear waste tomorrow.
8 Nothing's stopping them under Title 10 C.F.R. Code of
9 Federal Regulations 7248.

10 And my heart started to race a little bit when I 08:35
11 heard that, because there's another part of Title 10
12 Code of Federal Regulations. 5059. It has an identical
13 title to 7248: Changes, Tests and Experiments.

14 5059 was what Edison violated when it swapped
15 out reliable Westinghouse steam generators with 08:35
16 completely untested experimental steam generators.
17 Those generators failed in 11 months. They released
18 radiation into the atmosphere -- we don't know how much;
19 although, they say it wasn't much. They were supposed
20 to last 40 years, under 5059. And the reason the NRC is 08:35
21 here today is because of Regulation 5059.

22 I'm very, very concerned about this. Because if
23 Edison can start moving canisters tomorrow and can
24 replace components of a nuclear power plant under these
25 regulations, then really what is there for the Nuclear 08:36

1 Regulatory Commission to do? I mean, I'm really 08:36
2 grateful that Scott Morris and Linda Howell are here,
3 but it seems like you don't have any regulatory
4 authority, and it seems like we really need regulators
5 that are tough and willing to regulate and willing to 08:36
6 enforce -- enforce the regulatory law and regulatory
7 rules.

8 Thank you.

9 DR. VICTOR: Thank you very much for your comment.

10 Next is Lacey Johnson and then Harold Breen, it 08:36
11 appears.

12 MS. JOHNSON: Good evening. My name's

13 Lacey Johnson.

14 Please recall this Holtec nuclear waste storage
15 system. It is defective engineering and is wrong to 08:37
16 pass this serious problem onto my generation or other
17 communities. My friends in New Mexico are scared of
18 this waste being dumped on them. You know that you're
19 making a wrong choice.

20 Thank you, Panel, Edison and NRC. 08:37

21 DR. VICTOR: Thank you very much for your comment.

22 Next is Harold Breen. If you could help us with
23 the spelling of your name?

24 And then finally, Number 22 has some questions
25 about additional efforts regarding seismic uncertainty. 08:37

1 Harold Breen, the floor is yours. 08:37

2 MR. BREEN: Yeah, it's Harold Breen, just like
3 green, with a B.

4 DR. VICTOR: Oh, okay. The failure is -- B-R-E-E-N?

5 MR. BREEN: B-R-E-E-N. 08:37

6 DR. VICTOR: Okay. Thank you.

7 MR. BREEN: I'm a citizen, my wife is with me
8 tonight. We live in Dana Point. We know how close we
9 are to the San Onofre Nuclear Generating Station.

10 This is the 30th anniversary of the Tiananmen 08:38
11 Square Massacre.

12 We have a Panel here tonight involving a number
13 of elected officials, local officials, and I commend
14 them for accepting appointment to this Panel, Community
15 Panel. Nothing has ever happened about a Community 08:38
16 Panel in China investigating what happened at Tiananmen
17 Square.

18 This panel has the authority and the
19 responsibility as a Community Panel to try to protect
20 our community. I applaud you, all members, and I thank 08:39
21 the members of Edison and Holtec and the Federal agency
22 for being here and -- but the elected officials and the
23 local officials who serve on this committee are the real
24 force sitting in this room. We're asking you to do
25 something. Don't pass this on to the next panel. 08:39

1 Thank you. 08:39

2 DR. VICTOR: Thank you very much for your comments.

3 Number 22?

4 Okay. I want to make sure there's time for as

5 many answers as possible tonight. So I'm going to give 08:40

6 the floor now to Jerry Kern and Dan Stetson, who are

7 going to lead this conversation.

8 I just want to say, as I'm passing the baton,

9 directly to Ray Lutz's question about the letter. The

10 letter, in fact, was exactly as you urged us to address 08:40

11 Edison. They are the licensee. They have the

12 responsibility. It was a letter about Holtec. I, as a

13 courtesy, sent a copy of that letter to Holtec

14 management because I wanted to make sure we got a

15 response. Not quite the response I was expecting, but 08:40

16 there you go. But that's the reason we sent the letter

17 to Edison and not to Holtec initially.

18 UNKNOWN SPEAKER: Send one to Edison too and

19 complain about their dishonesty, please.

20 DR. VICTOR: Dan Stetson and Jerry Kern. 08:40

21 MR. STETSON: So, David, since you started, maybe

22 you would also like to make a comment or answer with

23 reference to the report done by your colleagues from

24 UC San Diego?

25 DR. VICTOR: Well, so I can't speak for them. 08:40

1 I want to speak to the larger issue about 08:40
2 physics, not statistics.

3 So you use a physical models when you need a
4 deterministic answer around the physics. And that was
5 done in the design of this and done in the certification 08:40
6 of this. But you also need to use statistical models
7 when you're dealing with sarcastic processes, processes
8 for which there's random business that you can't fully
9 arrive at with physics. That's why these analyses and
10 inspections done in the field are actually sometimes 08:41
11 before you have field experience, why it's done in a
12 statistical way.

13 The comment was that there's a paper out there
14 saying that the -- saying things about the physics.
15 That paper's wrong. That paper was withdrawn through 08:41
16 the peer review process and rejected through the peer
17 review process. And the meeting at which it was
18 submitted considers that case closed, having rejected
19 the paper as being incorrect.

20 UNKNOWN SPEAKER: Because they were threatened with 08:41
21 a lawsuit if they didn't do that.

22 UNKNOWN SPEAKER: Holtec threatened them with a
23 lawsuit. Another fact. You failed to mention that.

24 MR. KERN: Okay. There's a couple of questions
25 tonight about Canister Number 30. I'm going to try to 08:41

1 combine them. 08:41

2 Gary Headrick said -- the question is: How long
3 can a damaged canister be stored on-site, and what is
4 the status of Canister Number 30? And also somebody
5 asked: What is the temperature of Canister 30? 08:42

6 So if -- can we get Tom or Doug or somebody to
7 talk about Canister 30?

8 MR. PALMISANO: Yeah, Canister 30 -- first of all,
9 Canister 30 is not damaged. Canister 30 was -- had
10 completed the loading, welding, drying and filling with 08:42
11 helium process, was in the transfer cask. When the
12 download event occurred, we decided not to move
13 Canister 30 and download it. It is stored in
14 compliance with all of its applicable requirements.

15 It's restrained in the spent fuel pool building, and 08:42
16 it's adequately cooled.

17 It's heat load, the system design or licensed
18 for a 35KW. This canister is only loaded to 28KW. So
19 it's not loaded up to the maximum head load. I don't
20 have temperature data at my fingertips. The initial 08:42
21 analysis and measurements confirm that the canister was
22 within its spec and the ventilation had -- it dissipates
23 heat through the transfer cask naturally.

24 MS. HOWELL: Let me just add to that, the question
25 about temperature. I don't know what the exact value 08:43

1 was, but when we were on-site doing inspections in the 08:43
2 January-February time frame, they actually did use a
3 thermal probe to take the temperature of the canister;
4 although they're using an alternative method today --
5 and that's perfectly acceptable. But we will be 08:43
6 reporting that number in our upcoming inspection
7 report.

8 MR. STETSON: There were a couple of questions, one
9 from Congressman Levin's office and also from Surfrider
10 regarding the request of a full-time NRC inspector 08:43
11 on-site during the future offloading.

12 Could you respond to that please?

13 MR. MORRIS: Yeah. I actually met with the
14 Congressman myself, not once but twice, and I discussed
15 it with him. 08:43

16 The question that he put to the NRC was a letter
17 addressed to the Commission and specifically our
18 chairman. And so we, at the staff level, are continuing
19 to do what we planned to do and have done elsewhere
20 with -- with the periodic inspections, we've added -- 08:44
21 we've supplemented it with unannounced. But the
22 official response from the chairman is still with her
23 office. And I'm not -- it's -- I don't know when that
24 response will be out. And I don't know at this point
25 exactly what it's going to say. 08:44

1 MR. KERN: There was a couple of questions about the 08:44
2 canisters and the ASME certification or
3 noncertification or standard. Are these canisters
4 under pressure?

5 MR. BAUDER: Yeah, the canister are nominally under 08:44
6 100 PSI, which is actually very little pressure for a
7 pressure vessel. And that pressure is -- a contributor
8 of that pressure is inert helium, which is in the
9 canister to cool it.

10 When Tom made his made remarks, he's said 08:44
11 consistently: Canisters are designed in accordance with
12 ASME Code criteria. And Linda mentioned Criteria 3 of
13 the ASME Pressure -- Pressurized Code. That is true.

14 They are not stamped, and there's no need for them to be
15 stamped. A certificate of compliance, which is 08:45

16 approved by the Nuclear Regulatory Commission under a
17 review process, specifies that exact criteria, which is
18 in accordance with ASME Code, Chapter 3. But since
19 they're not traditional pressure vessels as we see out
20 in the industry, they are extra criteria that are 08:45

21 applied through the certificate of compliance to ensure
22 the proper design. So when Tom said they're designed in
23 accordance with, that's exactly correct, and that's what
24 we have in the field.

25 DR. VICTOR: Can I just ask -- I've asked Ted Quinn 08:45

1 separately to go look at these issues around ASME. 08:45

2 Is there anything you want to add directly on
3 this issue?

4 MR. QUINN: Well, I think Doug did describe it the
5 right way. 08:45

6 They -- and I think the NRC stated at a previous
7 hearing -- I think you stated that it was not required
8 to be stamped, that it was -- that it was -- they went
9 beyond their criteria to certify, to follow all the
10 guidance and certified, of course, with what Doug has 08:46
11 said.

12 MS. HOWELL: They didn't, Dan, if I could just
13 address that also, just to make supplement that Doug
14 has shared.

15 These are not traditional pressure vessels, and 08:46
16 they are not required to be certified under the ASME
17 Code. The ASME Code is recognized as a standard that
18 can be applied. The specific design criteria are
19 spelled out in the technical specifications associated
20 with the certificate of compliance. And so there are 08:46
21 sections of that -- of those technical specifications --
22 and I can't quote to you which table; they're in
23 Appendix B -- it does reference Section 3 of the ASME
24 Code. And there's also a section in those technical
25 specifications that specifically exempts these canisters 08:47

1 from having to be stamped. And there are reasons for 08:47
2 that.

3 The reason that Section 3 of the code is
4 important -- and for those of you that heard me talk in
5 the webinar on Monday -- it's in Section 3 that we find 08:47
6 the maximum acceptable wear data. And that value is
7 less than 10 percent of the canister wall thickness. So
8 that is the nexus of relationship between sections of
9 the ASME Code and the tech specs for the certificate of
10 compliance. 08:47

11 MR. MORRIS: And both of which documents are
12 enforceable regulatory requirements.

13 UNKNOWN SPEAKER: So you've cherry picked the
14 requirements --

15 DR. VICTOR: Can we just continue with the questions 08:47
16 here?

17 MR. KERN: Okay. As long as we're on the ASME Code,
18 somebody asked about corrosion cracking. Is that part
19 of the ASME code? Can you discuss it with us?

20 MR. PALMISANO: So the issue of chloride stress 08:47
21 corrosion cracking is recognized as the limited aging
22 mechanism for the canisters.

23 The -- I can't answer specifically if the code
24 talks about corrosion, but it certainly has in-service
25 inspection requirements that calls for periodic 08:48

1 monitoring. That's what's applied in the aging 08:48
2 management plan. Or for Holtec, our terminology is
3 inspection maintenance plan.

4 Again, it's a deep -- it's an important subject.
5 We've touched on it. We've talked about it before at 08:48
6 some length years ago. We need to bring it back and
7 spend a detailed discussion of it because it warrants
8 that.

9 MS. HOWELL: And let me also supplement Tom's
10 response. 08:48

11 There are some other light references to ASME
12 Code in the existing version of the tech specs. But
13 this certificate of compliance is still under its first
14 20 years of authorization. For other certificates of
15 compliance, when they hit that 20-year mark and they're 08:48
16 undergoing renewal, the vendor may, on occasion, go
17 ahead and incorporate reference to Section 11 of the
18 ASME Code, which is the in-service inspection
19 requirement that Ms. Lewis referenced.

20 Holtec is not there on this one. So they're 08:49
21 with the original sets of technical specifications.

22 MR. STETSON: For Scott or Linda, could you please
23 explain what constitutes a reportable event and also
24 what's the difference between a formal and nonformal
25 reporting of an event? 08:49

1 MR. MORRIS: The reportability requirements are 08:49
2 established in our regulations. So the reportability
3 requirements at issue here for anything associated with
4 an independent spent fuel storage installation are as
5 captured in Part 72 -- I don't know the extract one -- 08:49
6 but, you know, that's a rule. That's a regulation that
7 went through the notice -- that went through the
8 notice -- notice and comment, you know, and so
9 ultimately there's a -- well, there is a statements of
10 consideration document that goes to the basis for why 08:49
11 the specific reportability requirements are what they
12 are. So that's -- but I don't know.

13 You have a look on your face that says I'm not
14 answering your question. So --

15 MS. HOWELL: Let me supplement Tom, a second. 08:50

16 In this particular instance the reportability
17 requirement is, as Scott said, in Part 72. And the
18 issue that requires this to be reported is that there
19 were important safety features that were disabled or
20 could not function when called upon to function. So 08:50
21 that was the bottom line. And we didn't take that
22 lightly.

23 And I'll answer the second part of your question
24 in a second, Dan.

25 If you recall, that was the subject of an 08:50

1 escalated enforcement action that we characterized it as 08:50
2 Severity Level 3. So we did, just as many of you here
3 in this room, believe that it was important to report
4 that incident that occurred on August 3rd. And if you
5 listened to my webinar on Monday, I did note that we had 08:50
6 advised Southern California Edison when they initially
7 reported it to us informally on August 5th, they had a
8 different understanding. I think that Doug and Tom
9 explained that in the pre-decisional enforcement
10 conference. But we take it -- we do believe it's 08:51
11 important. There is a certain safety significance
12 associated with failures to make reports when they are
13 required by regulation.

14 There is no criteria for informal reporting.
15 We've characterized it as a courtesy call that was made 08:51
16 to our staff on August 6th to make us aware of something
17 that had happened.

18 San Onofre did not have the same understanding
19 as our staff did initially, and we had several weeks of
20 discussion. Ultimately they agreed with our 08:51
21 interpretation and did report the incident on
22 September 14th.

23 MR. KERN: Just real quickly, Mr. Strickland, even
24 though it was in your presentation about your
25 background, can you reiterate your employment status, I 08:51

1 guess? 08:51

2 MR. STRICKLAND: Sure. I retired from Pacific Gas &
3 Electric in May of last year. I formed my own
4 consulting company, and I'm an executive consultant
5 with Holtec. 08:52

6 MR. STETSON: There were a number of questions from
7 Donna and others, if some of these reports that had
8 been completed either by the NRC or by SCE, if they're
9 going to be available to the general public? If so and
10 when? 08:52

11 MS. HOWELL: For the NRC, I can't tell you a
12 specific date. I have a bridge chief, who's sitting in
13 the audience, reviewing a final draft of that. So it
14 should be out there in the public in the next few
15 weeks. And once that report is finalized and I've 08:52
16 signed off and on it, we will also post it to our
17 Spotlight page. I know it's sometimes difficult
18 sorting through our electronic document system. So
19 we're trying to make it easy for you to be able to
20 access information. 08:52

21 DR. VICTOR: Let's, also, on the San Onofre site
22 make -- in the section on the canister events, let's
23 make some direct links so they can see the NRC
24 documents more easily.

25 Do you have any more questions? 08:53

1 MR. KERN: Well, I just have one. Somebody brought 08:53
2 up the idea that they inspected canisters with the
3 cameras. Is there plans to inspect them all
4 eventually?

5 MR. PALMISANO: At this point we're satisfied that 08:53
6 the eight represents the 29 that have been downloaded
7 and we have good understanding of the scratching and
8 the significance and the extent of it. As we finish
9 the development of our inspection maintenance plan --
10 this is loaded in -- to identify what the recurring 08:53
11 frequency for canister inspections, we will go back and
12 reinspect some of these. We'll pick others at random.
13 So we're laying all that out in the inspection plan.

14 MR. STETSON: And perhaps a final question: What's
15 the life expectancy of these canisters? 08:53

16 MR. PALMISANO: The canisters are designed for
17 60 years. They have a service life expectation of a
18 hundred years with acceptable maintenance.

19 DR. VICTOR: Okay. I want to -- thank you very
20 much. I know there's some other questions. All of 08:54
21 them will get recorded. They will be answered. This
22 is a very, very important process.

23 I want to say one -- one other point of
24 response: Kyle Krahel from Congressman Levin's office
25 made a very important set of comments from 08:54

1 Congressman Levin. 08:54

2 I just want to underscore something: A lot of

3 people are enthusiastic about the bill that

4 Congressman Levin has introduced to put our fuel at the

5 top of the priority. I'm enthusiastic about the idea as 08:54

6 well. We also need to be realistic about our

7 expectation for the process of Congressional action.

8 The -- on the hearing that will happen next week, I

9 believe, and the Energy Committee will be looking at

10 three bills. They'll be looking at that bill; they'll 08:54

11 be looking a bill that's been introduced by

12 Congresswoman Matsui from the Sacramento area; and also

13 a bill that's been introduced by Congressman McNerney

14 and Shimkus, which is very similar to the so-called

15 Shimkus Bill from last year, that, among others, had 08:54

16 Scott Peters as a co-sponsor. A lot of the attention on

17 that hearing is going to be focusing on the McNerney,

18 Shimkus Bill. And the process of building a coalition

19 to get that through the House and ideally get something

20 similar through the Senate, is a process that requires 08:55

21 tradeoffs. And so we need to follow that process. We

22 need to intervene where possible. A bunch of us are

23 spending a lot of time on Capitol Hill working on this.

24 But we also need to be realistic about what we can get

25 done, especially in the current legislative environment. 08:55

1 And let's hope we get something serious done this time, 08:55
2 because next year it's going to be even harder with a
3 Presidential campaign and a full Electoral cycle
4 underway.

5 I want to pause for just a moment and see if 08:55
6 anybody else has any other questions or comments before
7 we break. I know everyone's been with exceptional
8 patience tonight.

9 John Taylor.

10 MR. TAYLOR: Thank you, Mr. Chairman. 08:55

11 I keep hearing about cooling pool, having a
12 cooling pool. And I don't know the answer to that.

13 Could you explain why people think we should
14 have a cooling pool on-site and why Edison apparently
15 does not think that's necessary? 08:55

16 MR. BAUDER: Well, first through the decommissioning
17 process there's no requirement or NRC requirement to
18 maintain a cooling pool. And you won't see cooling
19 pools maintained through any of the decommissioned
20 plants across the United States so far. 08:56

21 UNKNOWN SPEAKER: Crystal River kept theirs.

22 MR. BAUDER: Yeah, I believe through the full
23 decommissioning process at Crystal River, theirs will
24 be dismantled as well. Nonetheless, that's the
25 required piece of it. 08:56

1 Then you get into a situation about a canister 08:56
2 and the potential for stress corrosion cracking, as Tom
3 mentioned. And you get into a situation where if you
4 desire to put a canister back into a wet cooling pool, a
5 welded sealed canister, it would be a very tricky and 08:56
6 difficult operation. I don't believe it's been done
7 yet -- perhaps with a bolted lid canister it's been done
8 once in the United States, but it's not a proven
9 technique. There's no pathway for success there
10 that's -- that we could outline now. 08:56

11 There's actually better ways to deal with a
12 canister that has an issue in situ or by other methods,
13 like an overpack and shipping it off, than there would
14 be for putting it back into a pool. So there's been a
15 lot of discussion around it. 08:57

16 I think at some point we should address it in
17 more detail in the future.

18 MR. PALMISANO: Yeah. And again, in our mitigation
19 plan we're analyzing the options to deal with a
20 canister issue. And that will be part of inspection 08:57
21 and maintenance plan.

22 DR. VICTOR: This is one of the reasons why I am
23 very keen at our first meeting where we're not talking
24 about the resumption of fuel transfer operations is on
25 aging management and what we've been calling 08:57

1 defense-in-depth, because we need to go back to these 08:57
2 topics.

3 Already in the last year some new technologies
4 have emerged and the. We need to get ourselves better
5 educated about what's happening there and get our 08:57
6 questions sharpened about this.

7 This certainly is one of those topics that keeps
8 coming up, and we need to have a fuller set of
9 information about why the pools are -- would be removed
10 and what the other options are. So -- okay. Excellent. 08:58

11 I want to thank everyone. And please drive
12 safely on your way home. I know we've had a -- taken a
13 three-hour meeting and made it a three-and-a-half-hour
14 meeting. Maybe we'll shrink ourselves back down to
15 three hours next time. 08:58

16 Thank you.

17 (The proceedings ended at 8:58 p.m.)

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[conversation - dead]

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