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CEP REGULAR MEETING
SONGS SPENT FUEL STORAGE DEFENSE-IN-DEPTH
AND DECOMMISSIONING UPDATE

San Onofre, California and
Via Microsoft Teams

TRANSCRIPT OF MEETING
August 17, 2023

Reported by:
Denise Herft, CSR #12983
Assignment #5698403
Pages 1 - 120

1 SAN ONOFRE DECOMMISSIONING
2 COMMUNITY ENGAGEMENT PANEL MEETING
3 STATE OF CALIFORNIA, COUNTY OF ORANGE
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9 Transcript of video-recorded meeting,
10 San Onofre, California and via Microsoft Teams
11 commencing at 6:34 p.m., Thursday, August 17,
12 2023.

1 COMMUNITY ENGAGEMENT MEMBER ATTENDEES:
2 CEP CHAIRMAN - DR. DAVID G. VICTOR (Via Teams)
UNIVERSITY of CALIFORNIA, SAN DIEGO
3
4 CEP SECRETARY - MARTHA McNICHOLAS
5
6 VICE CHAIRMAN/TRUSTEE-EXECUTIVE DIRECTOR - DAN
STETSON, THE NICHOLAS ENDOWMENT
7
8 CAPTAIN MEL VERNON - SAN LUIS REY BAND of MISSION
INDIANS
9
10 ROB HOWARD - CITY OF OCEANSIDE REPRESENTATIVE
11
12 TED QUINN - AMERICAN NUCLEAR SOCIETY
13
14 HON. JOHN TAYLOR - SAN JUAN CAPISTRANO CITY
COUNCIL
15
16 GARRY BROWN - PRESIDENT/CEO - ORANGE COUNTY
COASTKEEPER
17
18 SCOTT KIBBEY - CALIFORNIA STATE PARKS, SOUTH
SECTOR SUPERINTENDENT
19
20 MARNI MAGDA - SIERRA CLUB
21
22 MIKE BALSAMO - SR. VP, GOVERNMENT RELATIONS RANCHO
MISSION VIEJO AND SOUTH ORANGE COUNTY ECONOMIC
23
24 COALITION BOARD MEMBER
25
26 ALYSSA NAPURI - ALTERNATE FOR HON. KATRINA FOLEY,
ORANGE COUNTY SUPERVISOR, 5th DISTRICT
27
28 HON. VICTOR CABRAL - SAN CLEMENTE CITY COUNCIL
29
30 KEVIN BARRIOS: ALTERNATE FOR VALENTINE "VAL"
MACEDO - LABORERS' INTERNATIONAL UNION OF NORTH
AMERICA, LOCAL 89
31
32 KRISTAL JABARA - (Alternate for Jim Desmond)
SAN DIEGO COUNTY SUPERVISOR, 5th DISTRICT
33
34 SAM JAMMAL - CAMP PENDLETON COMMUNITY PLANS AND
LIAISON OFFICER
35
36 ///

1 SOUTHERN CALIFORNIA EDISON SCE REPRESENTATIVES:
2 DOUG BAUDER - CHIEF NUCLEAR OFFICER AND VICE
PRESIDENT OF DECOMMISSIONING
3
4 VINCENT BILOVSKY - DIRECTOR DECOMMISSIONING
PROJECT
5 JERRY STEPHENSON - SCE INDEPENDENT SPENT FUEL
STORAGE INSTALLATION (SFSI) ENGINEERING MANAGER
6
7 RANDALL GRANAAS - SCE NUCLEAR FUEL AND ISFSI
ENGINEER
8 SCE TECHNICAL SUPPORT PRESENTERS:
9 MANUEL CAMARGO - Strategic Planning & Stakeholder
Engagement
10
11 JULIA MARTINEZ - Presentation Slides

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15 PUBLIC COMMENT PERIOD

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1 San Onofre, California, and Microsoft Teams,
2 Thursday, August 17, 2023
3

4 CHAIRMAN DAVID VICTOR: Can I just say as
5 we get started what a joy it is to have meetings
6 in person. And a particular joy to have a meeting
7 like today where we had the chance to see the
8 facility, meet people in person, talk about ideas,
9 we're going to have a lot of great discussions
10 this evening, and I'm just thrilled that we've had
11 a chance to do this.

12 It's one of the signs that we are --
13 we're not done with the pandemic, be vigilant, but
14 we're figuring how to manage and that's a great
15 thing.

16 My name is David Victor, I'm the
17 volunteer chairman of the San Onofre Nuclear
18 Station Community Engagement Panel. I want to
19 emphasize that tonight is a hybrid meeting, so
20 many of us are here in person. We also have
21 people at home or wherever they are on Teams. And
22 this is the model we followed for the last couple
23 of meetings, and we're going to keep doing this
24 for the foreseeable future and see how this hybrid
25 format works.

1 I want to thank the teams from Southern
2 California Edison, in particular the general
3 contractor here for decommissioning, SONGS
4 Decommissioning Solutions for hosting us tonight,
5 including in this tent here, which is the venue
6 that SONGS Decommissioning Solutions uses for
7 their daily meetings, for the lunch breaks, for
8 meetings and so on.

9 This tent is inside what's called the
10 owner-controlled area of the plant, so by NRC
11 regulatory requirements, all of us had to go
12 through the standard badging and vetting process,
13 and thanks to all of you for doing that, for being
14 patient with that process, and thanks to all of
15 the staff here who helped make that process work
16 so efficiently.

17 Those of you who were able to join the
18 pre-meeting tour, I hope you had a good time on
19 that tour, and most importantly learned something
20 about the scale of the operations, the location of
21 the different facilities, what's going on here.

22 I can say I haven't been on site for a
23 while. It's extraordinary how much less is here,
24 especially with the turbine buildings gone.
25 There's a giant hole there now. It's a sign of

1 how much progress is being made. I'm told that
2 the domes will begin coming down in about the year
3 2025, so the process seems to be roughly on
4 schedule.

5 And in experience in other plants is that
6 these processes actually sometimes run ahead of
7 schedule. So I think that's -- it's really
8 interesting.

9 The central topic tonight, which we have
10 by tradition had at least one meeting of our four
11 meetings every year on the subject of what we call
12 defense-in-depth. So it's how do we know that the
13 spent fuel that is for the foreseeable future
14 going to be at the spent fuel facility right
15 behind us, so the ISFSI, Independent Spent Fuel
16 Storage Installation how do we know the fuel is
17 safe? How do we know it's being monitored
18 properly? If there were ever an incident, how do
19 we know that the incident is being handled
20 properly?

21 If there was damage? The canister is
22 repaired, something which has not happened, not
23 damaged, not yet. How would we know that?

24 The question of defense-in-depth we look
25 at least once a year. That would be the main

1 subject of the tonight's meeting. This is really,
2 really important because in the absence of some
3 federal permanent facility for storing and
4 disposing of the spent fuel, like Yucca Mountain
5 or in the absence of some interim storage
6 facility, like the ones that have been talked
7 about in Texas and New Mexico and perhaps other
8 locations, in the absence of all that, which is
9 something we're working on fixing, in the absence
10 of that, the fuel is here for us and we need to
11 know what that means for our communities.

12 So we're going talk more about
13 defense-in-depth in a moment. I want to thank all
14 the members of the general public who are out here
15 in person tonight, all the members of the
16 Community Engagement Panel who are up here in
17 person tonight.

18 I see Dan Stetson is the vice chairman,
19 I'm the chairman. I see Martha McNicholas is with
20 us. Hello, Martha, it's great to have you here
21 virtually.

22 It's taken us a few years to figure out
23 the format, but I think the format with some
24 glitches here and there, I think, generally is
25 working very well.

1 A draft of the presentation for tonight
2 was posted a week ago. And I want to thank Julia
3 Martinez from San Onofre from SCE for running the
4 slide show for us.

5 If you look up on the screen now, you'll
6 see the agenda for tonight's meeting. We've
7 modified tonight's agenda. The norm is for three
8 hour meetings. We modified the agenda so that we
9 have one allocated to the tour. There was still
10 be one full hour for public comment as part of
11 tonight's meeting.

12 Just going through the agenda, we're
13 going to hear from the Chief Nuclear Officer Doug
14 Bauder and I are going to provide a few comments
15 in the beginning. Then Dan Stetson and I are
16 going to provide a few community updates, along
17 with any other inputs from members of the CEP, who
18 have various updates from the communities, and
19 then after that Doug Bauder and Vince Bilovsky
20 will give us a short overview of what's going on
21 with the dismantlement of the plant. Those of you
22 who have been with us today on the tour have seen
23 some of that in person, and then following that
24 we're going to turn to the main topic with
25 Engineers Jerry Stephenson and Randall Granaas who

1 are going to give us the latest overview on
2 defense-in-depth for the dry storage here at the
3 reactor.

4 We have, as I mentioned before, one hour
5 of public comment. Let me say that if members of
6 the CEP have comments or questions during the
7 presentations, you should ask those. One way you
8 make sure you get the floor is just put your tent
9 up sideways like that, then I'll be able to see
10 you, and I'll make sure you get the practice that
11 you're very good at it. Make sure you're able to
12 ask your questions.

13 And then members of the public who would
14 like to ask questions we can do that during the
15 public comment period.

16 Please, I've already been told I'm not
17 doing this very well, so now I need to follow my
18 own instructions. Am I doing a better job now
19 speaking into the microphone?

20 There's a lot of ambient noise in here, I
21 think whoever has the fan concession is doing
22 really well, and so there's a lot of background
23 noise in here so please make sure you speak
24 directly into the microphone for the benefit of
25 folks at home and also so that everybody here can

1 hear what you're saying.

2 So I want to make a few opening comments.
3 I want to first give the floor to Doug Bauder who
4 is going to make a few opening comments.

5 Doug, the floor is yours.

6 DOUG BAUDER: Thank you, David. I really
7 appreciate this, and at Edison we really
8 appreciate the opportunity to have you here for a
9 tour. And we put some thought into this. We
10 wanted to do this a couple years ago, but of
11 course COVID got in the way, so now I would
12 encourage hopefully your tour was informative and
13 any questions you had were answered, if they
14 weren't, I would ask you to ask me, Vince here,
15 for those answers or go up to one of the booths
16 that we have set up on the break, and if you have
17 any direct questions about what we're doing here,
18 be a great time to get them answered in person.
19 So we really appreciate having you here.

20 As David indicated tonight's agenda will
21 focus on Randall and Jerry, our experts here and
22 engineering and dealing with our fuel as we store
23 it here safely on the site, and so the focus will
24 be on that.

25 I do want to make a comment about safety.

1 Safety is number 1 here for us, as you would
2 guess, and so tonight since you're in the
3 restricted area of the site, if we have an event
4 or anything that occurs, which would cause you to
5 need to leave, I would ask you to do it in an
6 orderly way, get up and go to either one of the
7 exits at the back here, and then look for folks in
8 the green vests. The folks in the green vests
9 will guide you over to the entering point and will
10 take care of you from there, okay?

11 Because we have accountability, we have
12 all your names on a roster so we'll do that to
13 make sure that everybody is accounted for.

14 With that, I think back to you, David.

15 CHAIRMAN DAVID VICTOR: Thank you very
16 much, Doug.

17 I want to pick up on your comment about
18 the meeting format, the fact that we're here on
19 site. This was an experiment. We've never done
20 this before with the CEP. I think so far it's
21 been a terrific experiment. But I want to make a
22 more general comment about the meeting format for
23 the foreseeable future, which is we took a poll of
24 all the CEP members after the last in-person
25 meeting in Laguna Hills, which was also hybrid

1 format meeting like this one, and there was a
2 small majority that favored the continuation of
3 the hybrid format, meaning in person and online.
4 And so we're going to continue that for the
5 foreseeable future.

6 Let me just mention, though, that there
7 are pros and cons to that. I'm a teacher. We
8 have gone back to only in person in the classroom
9 because it gets people to engage directly and
10 there's a lot of benefits from being in person, I
11 get that completely. There are also a lot of
12 challenges with everybody's schedules, and so a
13 key function that we're performing here is to have
14 a two-way conduit between the communities that are
15 affected by the closure of the nuclear plant and
16 Edison, which is operating the closure, in both
17 directions. To do that, we need to have maximum
18 participation. That would suggest the value of
19 the hybrid format or online format. We're going
20 to continue this format going forward.

21 I want to pause for a moment and see if
22 any of the CEP members want to make comments about
23 that meeting format question before we go on.

24 I want to mention that my microphone is
25 coming and going with the fan or maybe the

1 Russians have hacked it. I'm not entirely sure
2 what's happened here, but if there's a way for us
3 to keep it constant, that would be fantastic.

4 I want to go to the next slide, which is
5 just some little more housekeeping before we get
6 started. We're going to have a public comment
7 period as is our norm here.

8 For those of you online, if you would
9 like to ask a question, you can already have sent
10 it by e-mail to this e-mail address that's listed
11 here on the screen, that's also posted online, and
12 those questions will receive -- will be first in
13 line to be asked to be asked tonight.

14 If you are participating during the
15 meeting and here in person and you'd like to make
16 a comment in public, fill out a form, there's a
17 form in the back of the room, fill the form out,
18 let us know you want to make a public comment,
19 we'll put you on the list to make a public comment
20 and we'll deal with that when we get to that
21 three-minute public comments as is our norm.

22 Those of you who are online, you can also
23 click on an online link and put your name on the
24 list as well. And we should put that in the chat
25 periodically, which will be done so that those of

1 you who are online can look at the chat box, click
2 on the link there, put your name on the list, and
3 then you can ask your question.

4 For CEP members who are participating at
5 home, you can use the raised hand icon under
6 reactions, under the Teams reactions, the little
7 link up on top that says "reactions," raise your
8 hand, we'll make sure that you are able to ask
9 your question as part of the normal flow of the
10 meeting here, and those of you who are in person I
11 mentioned to just raise your tent card.

12 If you want to raise your hand using a
13 phone use star 5. I would say that the system is
14 not yet seamless but such is life.

15 I want to go to some general community
16 updates, I want to say one thing, Dan will talk
17 about a few things, and we'll see if the other
18 members of the CEP have community updates. But
19 first I would like to -- if we can go to slide --
20 to the next slide. I would like to talk about the
21 topic on the left-hand side, the Spent Fuel Policy
22 Working Group, another one of those elegant
23 acronyms that we have.

24 It has become clear over the last nine
25 years that we have been holding these CEP meetings

1 that communities want to find a way to move the
2 spent fuel off site, not just chuck it over the
3 fence and walk away from it, but do it responsibly
4 with consent. There are a lot of other
5 communities around the country that have the same
6 views. I think our communities happen to be
7 extremely well-organized, very focused on this
8 issue, so we've been in the lead on a lot of these
9 questions.

10 That is not going to happen without a
11 change in federal law. The interim storage ideas
12 require change in federal law to deal with title
13 questions and some other issues. Permanent
14 repositories require, not just some changes in
15 federal law, but also focusing on making permanent
16 repositories. All that has to be put together
17 that's going to require action by congress.

18 Congress is not the most functional
19 institution on the planet, in case you've been
20 living in an undisclosed location for a long time.
21 It needs help focusing on what to do and how to do
22 it. So over the last several months we have held
23 two meetings with 26 stakeholders from all around
24 the country, mainly at other plants like ours that
25 have spent nuclear fuel and would like a change in

1 federal law. We held those meetings, we've
2 organized them, we've turned all of those
3 discussions into a document that has one page,
4 which is a summary with six points on it, this is
5 what we want in federal -- a change in federal law
6 and then an attachment to that document which has
7 their names, and also an explanation for why these
8 six, why they're so important. And I think that's
9 a big step forward.

10 Other groups have done similar things,
11 the so-called blue ribbon commission, more than a
12 decade ago did very similar work, path-breaking
13 work in this area, but it's never led to
14 legislative action. We've got to figure out how
15 we organize the political support for changes in
16 federal law. That's what we're doing with the
17 spent fuel policy working group.

18 As part of this, I've met with two
19 members of congress over the last month or two.
20 We've had a lot of other outreach to staff on the
21 hill. There's been a lot of interest in
22 testifying and providing support through many,
23 especially local institutions here, but we've been
24 very, very careful to make sure that this is not
25 just a Southern California thing. It's got to be

1 as many communities around the country as
2 possible, helping get their members of congress,
3 democrats and republicans -- this cannot just be a
4 democratic issue, I would say democrats are more
5 focused on it than republicans, but we need both
6 sides because you're not going to get things done
7 durably in Washington without democratic support
8 and republican support.

9 That's what we've been working on. That
10 document has been posted online, it's been
11 circulated to the CEP, members of the CEP have
12 been heavily involved in that process. I'm going
13 to continue working heavily on this issue. I
14 think this is a great opportunity, and this is one
15 of the areas where this panel has helped organize
16 otherwise disparate interests and crystallize them
17 and turn them into a real opportunity for us to
18 change federal law, which will then open the
19 opportunity to move the spent fuel out of here.

20 That's the community update that I wanted
21 to give. I'm going turn the floor over to Dan
22 Stetson for his updates, and then I'll pause and
23 see if members of the panel want to provide any
24 other updates.

25 Dan.

1 DAN STETSON: Thank you, David. First of
2 all, I want to thank SCE for the tour. I think it
3 was my 21st tour of the site. Each time I go I
4 learn something new. So I really want to thank
5 them for the tour of the area.

6 My next announcement is very bitter
7 sweet, and that is after nine years and more than
8 30 meetings, my friend and colleague David Victor
9 is going to roll off the panel as chair of the
10 CEP.

11 As you can imagine, I mean, David has
12 been invaluable over these nine years in terms of
13 his leadership and really moving things forward so
14 we really just can't thank him enough for
15 everything he's done. I mean, in addition to the
16 meetings, he's toured, he's gone back to Holtec
17 for their manufacturing plants. He's been to
18 Washington D.C. many times to meet with different
19 congress people.

20 He tried to convince me to go to Clive,
21 Utah in the middle of the summer, I said, David,
22 I'm dedicated but not as dedicated as you, but he
23 went and that's where they take a lot of the low
24 level spent fuel in the heat of the summer.

25 All of these were at his own expense. He

1 wasn't paid for any of those things, so we all owe
2 a great deal of thanks and appreciation for what
3 you've done during these years. And I've been
4 trying to pay a special attention tonight on how
5 these meetings work, because all these things I
6 really need to pay attention.

7 But a couple of our colleagues have said
8 a couple things, actually said it better than I
9 could. And Ted Quinn wrote, "An enormous thanks
10 to David for all he has done in supporting the
11 scientific, technical, regulatory, and societal
12 focus areas and all as aspects of decommissioning
13 at SONGS. His leadership has been a major
14 contributor to all that has been accomplished
15 here.

16 And then Garry Brown as well. I want to
17 echo Ted's comments for appreciation for all David
18 has accomplished for the CEP. And the first year
19 or two of the CEP meetings David handled numerous
20 contentious meetings --"

21 You remember those?

22 CHAIRMAN DAVID VICTOR: I have no idea
23 what you're talking about.

24 DAN STETSON: We got a lemon or two --
25 with the elegance of the leadership that we

1 needed. Everyone was trying to figure out exactly
2 what the CEP was, its purpose, and we had
3 significantly more attendees. David greatly
4 influenced our purpose and how we operate. He
5 also represented the CEP exceptionally well
6 throughout the country. Thank you so much,
7 David."

8 To give you an idea, David is also for
9 many of you who may or may not know, he's
10 internationally known in terms of his expertise in
11 climate change. Not too long ago you had a visit
12 to England, and I think you met the king over
13 there and was tutoring him on climate change.

14 David, we can't thank you enough for all
15 that you've done over these nine years.

16 CHAIRMAN DAVID VICTOR: I'm going to say
17 two things very quickly because at the end of the
18 meeting I'll say a couple more words, but it's
19 been a tremendous honor, and I'm going to be
20 continue working on behalf of the CEP on these
21 questions of the changes in federal law, because
22 it's so incredibly important for us.

23 At the end of the meeting I'll say a
24 couple more words about the honor that I feel in
25 having the opportunity to serve in this role.

1 DAN STETSON: That's exactly what I was
2 going to say, last night someone came up to me and
3 said, What's with Victor, is he retiring?

4 And I go, no, no, he's not retiring but
5 so much of his energy that he had focused for the
6 CEP meetings, he's going to focus that energy and
7 even more on working at the national level for
8 policy change.

9 Thank you for -- I know we'll be working
10 on parallel paths, this is not goodbye, we're
11 going to continue to see you again.

12 So I've been asked now to step into
13 David's shoes, and those are huge shoes that I
14 obviously cannot fill. I certainly don't have the
15 credentials that David has. All I can do is
16 pledge to you my very best to provide -- because
17 really the whole purpose of what we do here is to
18 provide a conduit of information back and forth
19 between the general public and Southern California
20 Edison. And I certainly will do my best to
21 continue to do that.

22 And you're certainly welcome to contact
23 me any day of the week via e-mail or phone call if
24 you have any questions. I'm happy to meet with
25 you. This is not something just by myself, I'm

1 very fortunate to have Victor here stepping in as
2 vice chair. Victor serves on the San Clemente
3 City Council, and Martha McNicholas has agreed to
4 stay on here as our secretary. There's the three
5 of us but really we depend all 18 members of the
6 CEP. Each and every one of you is important and a
7 vital part to this committee.

8 Really we are reaching out to each and
9 every one of you, and thank you all for what
10 you've done in the past and also what we're going
11 to continue to do moving forward.

12 Thank you, David.

13 CHAIRMAN DAVID VICTOR: Thank you so
14 much, Dan. It's really been a joy to help build
15 an institution.

16 I want to shift to major topics of
17 tonight's meeting to how things are going with the
18 decommissioning of the site. I'm going to ask
19 Doug Bauder to introduce Vince, and then talk
20 about that a little bit, and we'll go to the next
21 major topic, Doug.

22 DOUG BAUDER: Thank you, David.

23 Julie, if you can move to the next slide
24 that would be great. Those of you who have
25 attended before, we use this slide and talk to it

1 at every meeting. These are three decommissioning
2 principles: Safety, stewardship, and engagement,
3 with safety being number 1. We're dedicated to it
4 in everything we do here. So is our general
5 contractor SONGS Decommissioning Solutions.

6 Regarding stewardship, this is another
7 area that we take with very great importance
8 that's in how we treat the environment, how we
9 treat and handle our decommissioning funds, and in
10 this case tonight you're going to hear about
11 stewardship in so much as we are use
12 defense-in-depth as we are stewards of the nuclear
13 fuel as to how it can be handled and disposed of
14 in a proper place as David spoke to earlier.

15 Then engagement. This is the piece of
16 engagement picture right here. I would say that
17 you got hopefully a really good tour, at least to
18 get a picture of what's happening around the
19 station. Please go out and tell your friends and
20 coworkers that we do these frequently.

21 We do public walking tours. In fact, we
22 held one on Saturday, July 29th, and we have
23 another one coming up on Saturday, September 16th.
24 We found that engaging through tours is a very
25 effective way to share about what's happening here

1 at the station.

2 Next slide, please. Our major work
3 streams: Dismantling above-ground structures and
4 then safely managing the fuel, which you'll hear
5 about, and then advocating for offsite disposal.

6 I will tell you that for those of you who
7 took the tour around tonight, some of you may
8 have, some of you may not have seen the station
9 when it was operating, but about 50 percent of the
10 buildings have now been taken down.

11 Directly behind you along the coastline
12 here used to be two huge turbine buildings,
13 they're completely gone. The intake structure is
14 gone and backfilled so we can get on with the rest
15 of the decommissioning.

16 Vince will share with you an overhead
17 picture to show you what used to be and what is
18 now and point to the direction we're headed.

19 David talked about the domes earlier.
20 The domes will be last to go because of the
21 equipment inside the domes need to be removed
22 before they can be demolished. Those are the
23 landmark that everybody sees, but they'll be kind
24 of the last visual piece to go down, okay.

25 With that, I'll hand it off. Actually, I

1 want to talk about the website briefly. I talked
2 about the walking tours, and the information is
3 really important on the website. You'll be able
4 to see a transcript of everything that happened
5 tonight on the website. You can check past CEP
6 meetings. You can also check information on the
7 website. Let's say you have a question about a
8 topic, you can go to songscommunity.com on our
9 website and it's organized in a way you can
10 investigate a topic. If you leave here tonight
11 with questions, that can be very helpful.

12 CHAIRMAN DAVID VICTOR: Can I also ask,
13 if anyone in the public sees something on the
14 website that seems whacky or incoherent, let us
15 know. We've done a lot of work to improve the
16 website and some feedback from users is always
17 helpful, even if it's a little angry.

18 VINCE BILOVSKY: We can advance the next
19 slide. Tonight I'm going to give a quick update
20 on activities that we're doing right now. Won't
21 have the normal slide show. Sorry, Martha. I
22 know you usually like that. But we're going to --
23 I promise we'll get that next time.

24 Hopefully most of you got to take the
25 tour, you get to see where half of the site

1 buildings were torn down since the project
2 started. Most of the work right now is going on
3 inside the containment domes. If you look at
4 these first three bullets here, this is the work
5 associated with the downsizing of the reactor
6 vessel internals. Those are the parts that are
7 inside the reactor core minus the fuel that's
8 already been taken out to the ISFSI.

9 There's four types of waste: Class A,
10 class B, C, and Greater-Than-Class C, low level
11 waste, and that's all involved in the reactor
12 vessel internals. That project has been going on
13 for about two years now and should come to a close
14 by the end of the year.

15 Also by the end of this year, the
16 preparations have been going on now for several
17 months, we're going to start moving the large
18 components. Large components being things like
19 steam generators, pressurizers, reactor coolant
20 pumps. That will start by the end of this year,
21 the actual removal of those components.

22 We're also preparing for the demolition
23 of the auxiliary buildings. The auxiliary
24 buildings are those buildings between the two
25 containment domes.

1 Finally for inside work, this is actually
2 not a containment, but in spent fuel buildings
3 we're removing the spent fuel racks, that has been
4 completed in unit 2 and we're about halfway done
5 in unit 3. A lot of big milestones coming up
6 before the end of this year.

7 For the outside work we shipped about a
8 quarter of a billion pounds of waste, little less
9 than billion pounds. We are over 25 percent the
10 way through for shipping waste. We're just about
11 finished with the intake structure demolition and
12 backfill. I'll show a picture where that is in
13 two slides from now.

14 Let's go ahead to the next slide. It's
15 showing the project schedule. The reactor vessel
16 internals, that's the first line there, that
17 should be finished by end the year. Then we're
18 going to get into some parallel activities, one
19 being the reactor vessel segmentation, that's the
20 vessel itself, and the large components that I
21 mentioned earlier.

22 That work will continue until about the
23 end of 2025, along with the demolition of the
24 buildings that are between the containment domes,
25 and then the big question about when we're going

1 to knock down the containment domes themselves,
2 well, you will see that is happening mostly 2026
3 and finishing in 2027, then it's moving a lot of
4 soil around, grading the property, doing the
5 final -- last of the final status surveys.

6 Go to the next slide. This will be my
7 last slide here. Just shows you here a picture of
8 the overhead aerial view of the plant in 2017 and
9 what it looked like in April of 2023. This has
10 actually been more that's happened, if you see in
11 the intake structure between the containment domes
12 towards the ocean, that area has been demolished.
13 There was a bridge going into the buildings. It's
14 been demolished and paved over. You may have seen
15 that on the tour today.

16 That's really what I have. I went
17 through that really quickly. Please, if you have
18 any questions later, come over and ask.

19 CHAIRMAN DAVID VICTOR: Ted Quinn.

20 TED QUINN: I want to ask you about the
21 segmentation. We didn't do it for unit 1, but
22 other plants around the country have done it. Do
23 you have lessons learned from around the country
24 that have benefited forensic you in doing this?

25 VINCE BILOVSKY: In doing the

1 segmentation?

2 TED QUINN: Yes.

3 CHAIRMAN DAVID VICTOR: Can I suggest?
4 Can you just say remind everybody in a couple
5 sentences what segmentation is.

6 VINCE BILOVSKY: For the reactor vessel
7 internal segmentation project that is done under
8 water using mechanical cutting methods, rotating
9 saws, and they're cut into smaller pieces, and
10 then packaged in their appropriate waste type
11 packaging.

12 There were a number of lessons learned
13 from other projects that were applied to our
14 project here. This is the most difficult piece of
15 a decommissioning project I would say, in my
16 opinion. We can get into some of that detail.

17 TED QUINN: Thank you.

18 CHAIRMAN DAVID VICTOR: Can I ask, Ted,
19 the direction of your question was have things
20 been learned in the industry that make it possible
21 to do this faster or safer, is that the direction
22 of your question?

23 TED QUINN: Politically moving a vessel
24 it's better for segmentation if you can do it. I
25 like this, and I was hoping the lessons learned

1 would benefit you and will also benefit the people
2 after you that are doing this.

3 VINCE BILOVSKY: That's the directive,
4 yeah. The Nuclear Energy Institute has put
5 together a pretty strong effort to try and
6 consolidate some of the lessons learned. It's a
7 very competitive business, though. So there's a
8 lot of proprietary information, so that has to be
9 considered as well.

10 TED QUINN: Good point.

11 CHAIRMAN DAVID VICTOR: I think this is
12 the last slide in terms of plant updates before we
13 go to the next topic, I wanted to see if anyone
14 else has any questions about what's going on at
15 the plant, maybe what you saw today, or anything
16 like that.

17 No? Excellent.

18 We're going back to you, Doug.

19 JERRY STEPHENSON: I think it's me. I'm
20 Jerry Stephenson, engineering manager. Next
21 slide, please.

22 Like Dr. Victor said, we're going to talk
23 about defense-in-depth tonight. This slide has
24 the five pillars of defense-in-depth. We designed
25 it right, we fabricated right, we operate it, and

1 maintain it extremely well. We have tremendous
2 amount of inspection, and we've also developed for
3 remediation. We're the only utility that has
4 remediation capability.

5 CHAIRMAN DAVID VICTOR: Can you lean a
6 little closer to your microphone. That's the only
7 thing I've learned tonight is the distance to the
8 microphone.

9 JERRY STEPHENSON: How am I doing now?
10 That better?

11 CHAIRMAN DAVID VICTOR: Took me much
12 longer to learn that.

13 JERRY STEPHENSON: Okay. Next slide,
14 please. So this is the same five pillars. Look
15 at that list of dates over on the right side.
16 We've been talking about defense-in-depth for ten
17 years now, almost ten years, almost a decade.
18 We're not going to try to repeat everything that's
19 been said for all of this time.

20 I'll remind you that we've done some
21 great things here at San Onofre. We're very proud
22 of the things we've done. For example, the design
23 of the canisters requires 1/2 inch thick wall. We
24 went with 5/8 thick walls. Silo canisters is 304
25 stainless steel, we went with 316L. Tremendous

1 improvement in corrosion existence with 316.

2 We're the only utility, the only plant in
3 the world that I know of that has peened our welds
4 in heat affected zones, to put a compression
5 stress layer on top of the welds to make them
6 pretty much corrosion proof. We also used
7 advanced rolling and welding techniques.

8 We won industry awards for our inspection
9 that we developed. We also developed mitigation
10 that's leading the industry. So I can go on and
11 on. Those are some key points. I'm not going to
12 try, like I said, repeat. If you have questions,
13 submit them at songscommunity.com or raise your
14 hand. We're engineers, we're geeks, we love to
15 answer questions so send them all in, okay.

16 Moving to the big picture. Dry fuel
17 storage process is quite mature in the United
18 States. There are no big problems that the
19 industry is trying to solve, so they ask us to
20 give an update. Every year we think, well,
21 there's not much changed, okay, but we can talk
22 about some things. I'll get to my point. The
23 point of my assignment here tonight is to
24 introduce Randall Granaas. So Randall is our
25 expert on dry fuel storage. Remember last year I

1 introduced Randall at this time. I introduced him
2 as an international expert, well, that hasn't
3 changed. Randall just returned from a trip to
4 Vienna where he was on a panel to help the IAEA,
5 International Atomic Energy Agency panel to help
6 the Europeans plot their path forward for dry fuel
7 storage.

8 And, you know, just a little nugget from
9 Randall's information about Europe and the rest of
10 the world. The rest of the world is moving away
11 from the bolted lid casks that have been discussed
12 many times at these meetings toward the same
13 welded canister system we use here in the United
14 States, used at SONGS and used almost exclusively
15 here in the United States.

16 That's the rest of the world is going to
17 same way that SONGS has been going for all these
18 decades. Next slide, please.

19 Randall is very well connected in the
20 industry. So he was able to come up with some
21 interesting things to talk about tonight. They're
22 technical. They're all good news. There's no bad
23 news out there. One example of good news is that
24 some research has been published that concludes
25 that high burn-up fuel is basically a nonproblem.

1 We already knew that. That is more data for us to
2 crunch as engineers.

3 Tonight Randall will talk about our
4 readiness for our canisters to ship when a site
5 becomes available. He'll discuss the inspections
6 that we do on our in storage canisters. He'll
7 address the recommendations that were made by the
8 Coastal Commission contractor on our inspection
9 and maintenance program for the Holtec ISFSI.
10 There were some members of the public who thought
11 we had rejected one or more recommendations.
12 That's not true. We did disagree with one of the
13 recommendations, we continue to disagree with that
14 recommendation. We're more than willing to --
15 hey, who turn my mic up -- we're more than willing
16 to implement that recommendation.

17 In fact, it's not unusual for
18 professionals to disagree. What do you do when
19 professionals disagree? You usually just take the
20 most conservative option, okay. We can take the
21 most conservative that satisfies both of the
22 positions, so we took the most conservative
23 option, we're implementing what they recommended,
24 which is slightly more conservative than what
25 SONGS was proposing, and Randall will give you

1 more details about that.

2 He's also going to discuss some R&D going
3 in the industry in the mitigation area. EPRE
4 (Electric Power Research Institute) is looking at
5 developing a system. Actually they're taking the
6 system that SONGS pioneered here, and they're
7 making it available to the rest of the industry.
8 Once again, we're proud to be leading the industry
9 in this area.

10 So before I tell you too much about our
11 presentation, I'll turn it over to Randall
12 Granaas.

13 RANDALL GRANAAS: Thank you, Jerry.

14 Good evening, everyone. I think you can
15 hear me okay.

16 Next slide, please. All right. So we've
17 shown this slide in the past, and now it's updated
18 to reflect its 2023, and only two Holtec canisters
19 and 14 unit 1 canisters are not qualified for
20 transportation yet. And as we've discussed in the
21 past, if there were a place to send the fuel, it's
22 likely the transportation license for the unit 1
23 fuel can be amended to allow shipping the unit 1
24 fuel canisters.

25 The same reasoning applies to the two

1 remaining Holtec canisters that aren't qualified
2 for transportation yet.

3 Next slide, please. As we've discussed
4 in previous meetings, the canisters loaded with
5 fuel are licensed for transportation under the NRC
6 approved certificate of compliance or COC shown on
7 this slide. So what's new is the
8 Greater-Than-Class C, or GTCC, waste canisters we
9 currently loaded, as well as the GTCC waste
10 canisters we loaded in the past are now licensed
11 for transportation. And you'll note that the GTCC
12 waste canisters are licensed for transportation
13 under the same COC, which is 71-9302, as the TN
14 canisters with units 2 and 3 fuel, and that's
15 because they use the same model transportation
16 cask.

17 All right. Next slide, please.

18 CHAIRMAN DAVID VICTOR: Before you go on,
19 can I just -- let me see if I can crystallize the
20 questions that I've heard from the public about
21 this, because this slide and the previous slide
22 tell us that by 2030, and given the pace at which
23 policies change in here, 2030 is tomorrow and no
24 fuel is going to move by 2030. All of the fuel
25 will be ready to go as long as there's a place to

1 send it and we can get in line, and you're saying
2 this is the last step in having the last of the
3 kinds of canisters on the site that were then
4 approved for transportation.

5 So basically with this slide and the
6 previous slide as soon as we have success changing
7 federal law and creating options for permanent
8 storage or more likely interim storage and then
9 permanent storage, our fuel is ready to go, all of
10 it?

11 JERRY STEPHENSON: That's correct. We're
12 waiting for a place to send it.

13 CHAIRMAN DAVID VICTOR: Dan, did you want
14 to say something about that?

15 DAN STETSON: Yeah, I had a quick
16 question. Thank you, David.

17 As we look at this, we got the Orano
18 canisters and the Holtec, and now we've got those
19 that are for the Greater-Than-Class C waste,
20 what's the difference between those canisters
21 versus the other ones that we have from AREVA or
22 Holtec?

23 RANDALL GRANAAS: As it turns out I got
24 several slides dedicated to that. That was a
25 question that was asked, so we'll be getting to

1 that soon.

2 DAN STETSON: Great. Thank you.

3 RANDALL GRANAAS: You're welcome.

4 Can you we flip to the next slide. As a
5 matter of fact, on queue.

6 There it is. As Dan was suggesting we
7 did receive a request from a panel member to
8 compare spent fuel canisters to GTCC waste
9 canisters such as similarities, differences, why
10 they may be different, et cetera.

11 So for the spent fuel, spent fuel inserts
12 are stored in a spent fuel canister. NRC rules
13 prohibit mixing spent fuel and GTCC waste within a
14 canister with the exception of the inserts that
15 are stored in the fuel. For example, that would
16 be the control rods that are used to stop the
17 fission process.

18 For a fuel canister, and bear with me for
19 a moment, because -- the next few slides will have
20 photos. The fuel basket is placed on the -- lost
21 mine. There it goes -- is placed in the canister
22 shell, then the canister is placed in the transfer
23 cask, the fuel is loaded in the fuel basket, and
24 then the canister within the transfer cask is
25 sealed, processed, and transferred to its storage

1 location.

2 And if Julia can flip to the next slide,
3 it will help illustrate what I'm discussing here.
4 There it is, perfect.

5 So on the photo on the left, you can see
6 the nesting of the fuel basket within the canister
7 shell, and then the canister within the transfer
8 cask. So that's how that spent fuel canister is
9 arranged or nested. Can you go back to the
10 previous slide, please, Julia. That's not very
11 fast, is it. There.

12 For the GTCC waste canisters they contain
13 only activated metals. Activated means metal made
14 radioactive by neutrons from fission. So there's
15 no spent fuel stored in the GTCC waste canisters,
16 there's no fission products from the splitting of
17 uranium or plutonium, such as Cesium 137 or
18 Strontium 90. None of that is stored in a GTCC
19 waste canister.

20 For the GTCC waste canister, first the
21 furniture, what we call the furniture is placed in
22 the liner, and then the GTCC waste is loaded in
23 the furniture and in parallel, the canister is
24 placed in the transfer cask, and then the loaded
25 liner is placed in the canister within the

1 transfer cask, and then after that is the same as
2 spent fuel. The canister within the transfer cask
3 is sealed, processed, and transferred to the
4 storage location.

5 Next slide, please. So again, the photo
6 on the left shows the fuel basket within the
7 canister, and the canister being inserted into the
8 transfer cask. The photo on the right shows a
9 liner being loaded with a reactor vessel internal
10 segment. Arranging and -- so arranging and
11 fitting the segments in the furniture is sort of
12 like a game of Tetris almost how these pieces fit
13 in there. So when the lid is installed, the liner
14 loading is complete, and then the entire liner is
15 lifted in and placed within the canister shell,
16 which is inside that is nested inside the transfer
17 cask.

18 And next slide, please. So the photo on
19 the left shows a liner prior to installing the
20 furniture. The photos in the middle are
21 furniture, which is used to arrange and support
22 reactor vessel internal segments, and we have
23 three different types of furniture to accommodate
24 the different sizes and shapes of segments. And
25 the photo on the right shows the furniture being

1 placed inside the liner. So you can get the idea
2 of the nesting here again, you got the furniture
3 inside the liner, and then that liner will go into
4 the canister.

5 Next slide, please. Here we have a table
6 showing the attributes of each of the four dry
7 storage canisters deployed at SONGS. All the
8 canisters have the same shell thickness, they all
9 use the same shell material, and they have the
10 same seismic rating. The GTCC waste canisters are
11 conservatively designed, fabricated, and processed
12 the same as the spent fuel canister. And the
13 unit 1 GTCC waste canister has the same external
14 dimensions as the 24PT1 canister used to store
15 unit 1 fuel. And the units 2 and 3 GTCC waste
16 canisters have the same external dimensions as the
17 24PT4 canister used to store units 2/3 fuel. The
18 24PT4 canister is the longer than the unit 1
19 canister, because the unit 1 fuel is shorter.

20 Next slide, please. And so why does GTCC
21 waste use or need a liner? So when we load a
22 canister with fuel it typically takes six to eight
23 hours. Loading a liner with GTCC waste can take
24 days or even months. So loading a GTCC waste
25 canister that may occur in parallel in both units

1 2 and 3 containments. That's several liners in
2 the reactor cavity at the same time. Several
3 transfer casks would be necessary to support the
4 parallel loading of canisters, and transfer casks
5 are expensive, and there aren't very many of them
6 in the industry.

7 Even if we had plenty of transfer casks
8 available, leaving the cask submerged in the
9 cavity water for an extended period, would make
10 decontaminating the cask surface much more
11 difficult and time-consuming. So the surface of
12 the transfer casks have to be free of radioactive
13 contamination during the transfer to the ISFSI,
14 because the canister is outdoors when we transfer
15 it to the ISFSI.

16 The canister we can't leave that in the
17 reactor cavity. Outside of the transfer cask is
18 outside of the canister has to remain free of
19 radioactive contamination. So when the canisters
20 placed in the transfer cask, it's sealed at the
21 top, and that prevents from the reactor cavity
22 water from coming in contact with the shell. This
23 is important because out of our ISFSI the canister
24 is stored outdoors and ambient air flows over the
25 canister shell when it's in storage.

1 The liners, the liners can be left in the
2 reactor cavity for extended periods, because
3 they're going to be sealed inside of the canister
4 just like basically becomes part of the payload.
5 And the liner also provides additional shielding
6 for gamma radiation.

7 I think that's everything I had about the
8 difference between GTCC waste canister and fuel.

9 CHAIRMAN DAVID VICTOR: There's going to
10 be a test at the end.

11 RANDALL GRANAAS: Absolutely, going to be
12 an exam.

13 CHAIRMAN DAVID VICTOR: Pay attention.

14 RANDALL GRANAAS. This was what Jerry was
15 mentioning earlier during the last community
16 engagement meeting --

17 CHAIRMAN DAVID VICTOR: Sorry. Ted.

18 TED QUINN: I wanted to ask about the
19 difference in qualifications of the canisters. We
20 at some past meetings we've covered huge amounts
21 of information on air qualification, the two. I
22 haven't heard much on this particular canister.
23 It looks like the qualification seismic and
24 everything is the same material. Is there
25 anything within the certification of NRC that's

1 different on this canister?

2 RANDALL GRANAAS: There isn't in a sense.
3 There is no -- we have a certification for storing
4 the fuel, and we showed it on the previous slide
5 right. There is not NRC certification for storing
6 the Greater-Than-Class C waste. We're allowed to
7 store it in the ISFSI, and we have to do an
8 evaluation before we store it out there. Now
9 there is a certificate for transportation for the
10 GTCC waste canisters.

11 TED QUINN: Is it going the same place
12 that we would send the fuel?

13 RANDALL GRANAAS: It is.

14 TED QUINN: It's going to be treated
15 exactly the same?

16 RANDALL GRANAAS: For transportation it
17 essentially is.

18 TED QUINN: Okay.

19 RANDALL GRANAAS: Also, as I mentioned,
20 we designed and fabricated and processed ours the
21 same as if its fuel.

22 TED QUINN: A lot less heat generation?

23 RANDALL GRANAAS: A lot less heat.

24 TED QUINN: I mean, almost none.

25 CHAIRMAN DAVID VICTOR: None.

1 RANDALL GRANAAS: There is a little bit
2 but not nearly as much as fuel that's correct.

3 TED QUINN: Thank you.

4 CHAIRMAN DAVID VICTOR: Can -- I don't
5 want to get us too far off track but since we're
6 in the weeds, why doesn't have the NRC have a
7 standard here?

8 RANDALL GRANAAS: For Greater-Than-Class
9 C waste? First of all --

10 CHAIRMAN DAVID VICTOR: The NRC is the
11 Nuclear Regulatory Commission, the key regulator
12 of this industry.

13 RANDALL GRANAAS: Sure. The
14 Greater-Than-Class C waste is actually under our
15 Part 50 license, our operating license, which is
16 now our possession-only license. We're allowed as
17 an operating reactor you generate
18 Greater-Than-Class C waste by having that Part 50
19 license we're allowed to have that. They don't
20 have the same rules for storing it as they do for
21 the spent fuel.

22 They would interestingly if we went for a
23 specific license at some sites use rather than --
24 maybe I'm getting too far down the weeds in terms
25 of licenses -- they would expect the GTCC to be

1 included in the license but not us, because we
2 have an operating reactor license.

3 CHAIRMAN DAVID VICTOR: John Taylor?

4 JOHN TAYLOR: Could you just what's
5 lacking in these containers that are not qualified
6 at this point? Is it radiation levels?

7 RANDALL GRANAAS: It could be either the
8 heat or the radiation levels, but typically right
9 now it's the radiation levels, and they have to
10 meet federal regulations for transportation.

11 JOHN TAYLOR: Basically we're waiting for
12 them to cool down a little bit more before they're
13 qualified for transport?

14 RANDALL GRANAAS: Correct. Especially
15 for the Greater-Than-Class C waste canisters,
16 obviously there's, as Ted suggested, there's not a
17 lot of heat, so in that case you really are
18 waiting for the decay in the radiation so you can
19 put it on the roads.

20 CHAIRMAN DAVID VICTOR: Most of the
21 canisters that are not ready to move from unit 1
22 which is a different fuel design.

23 RANDALL GRANAAS: That's correct.

24 CHAIRMAN DAVID VICTOR: Alyssa?

25 ALYSSA NAPURI: I have a question about

1 the transportation for all of this, assuming that
2 we still have our rail line in 2030 and it doesn't
3 fully fall into the ocean, is that the only way we
4 can transfer all of these canisters, or are there
5 alternative ways we can --

6 RANDALL GRANAAS: There are alternative
7 ways. We would prefer railway where we're at. We
8 think that's the best way. You could use a barge.
9 You could use trucks. The Department of Energy
10 looks at all these. They come to sites and they
11 evaluate shutdown sites. Some sites don't have a
12 good rail line, and they are looking at barges and
13 maybe taking a truck and getting it to the rail
14 head where they can put it on the rail car.

15 CHAIRMAN DAVID VICTOR: Let me mention we
16 have an inquiry out to some folks at the
17 Department of Energy who have been doing these
18 indicative transportation plans. They've done
19 them for other sites, and there's discussion now
20 about doing one for San Onofre and to actually
21 share the draft of that with us and to come to a
22 future CEP meeting I think would be a terrific
23 idea.

24 We've talked about for a few years ago,
25 but I think it's time to refresh the question of

1 how would you actually move this spent fuel out of
2 here?

3 ALYSSA NAPURI: I think that's right.
4 I'm sure the supervisor would support it
5 considering what the status of our current rail
6 system that's this line is dependent on.

7 CHAIRMAN DAVID VICTOR: I don't think
8 it's going to buy a ticket on the coaster.

9 Okay. No other questions? Back to you,
10 Randall.

11 RANDALL GRANAAS: Jerry mentioned earlier
12 during the last CEP meeting we agreed to provide
13 an update on SCE's acceptance the recommendations
14 made by the independent reviewer of SONGS
15 inspection and maintenance program for the U Max
16 ISFSI. As a refresher, the inspection and
17 maintenance program is intended to ensure the
18 Holtec canisters remain in good condition, to
19 support onsite transfer and offsite
20 transportation.

21 The inspection and maintenance program
22 was submitted to the California Coastal Commission
23 on March 31st of 2020, was reviewed by commission
24 staff as well as an independent engineering
25 consulting firm Lucius Pitkin, Inc. or LPI, and

1 staff recommended approval of the IMP for
2 recommendations made by LPI in July 12, 2020, and
3 July 16, 2020, the commission had approved the
4 IMP.

5 Next slide, please. So now I am going to
6 apologize in advance we thought the last segment
7 was bad, so this is going to get fairly technical,
8 throwing around a lot of numbers, and I think it's
9 an unavoidable consequence of contrasting LPI's
10 recommendations and SCE's position in the first
11 draft of our inspection and maintenance program.

12 So here we go. First LPI recommended
13 used a flaw depth of 0.0625 inches as the
14 threshold to repair a canister. 0.0625 inches
15 represents 10 percent of the 5/8 inch shell or
16 0.625 inch shell that we use at SONGS. That means
17 that 90 percent of the shell while remains at
18 0.0625 inches, and it's illustrated in the photo
19 at the right, that's 1/16 inch against a 5/8 inch
20 canister shell.

21 Next the nominal canister shell thickness
22 is 0.5 inches. Per ASME code the allowance would
23 be 0.45 inches, which is a 10 percent reduction in
24 wall thickness. SCE specified that additional 1/8
25 shell thickness, as we mentioned earlier, to a

1 nominal design. Our position is up to
2 0.175 inches is allowable. In other words, 0.0625
3 less 0.45 gets you to the 0.175 inches, so that
4 was our position.

5 Next slide.

6 CHAIRMAN DAVID VICTOR: Dan.

7 DAN STETSON: Randall, for clarification
8 when you say "flaw," by that you're basically
9 referring to a scratch or whatever might call a
10 gouge or something like that?

11 RANDALL GRANAAS: It could be a scratch,
12 it could be a gouge, right, yes.

13 DAN STETSON: That's what you're
14 referring to when you say "flaw"?

15 RANDALL GRANAAS: Flaw you could call it
16 a crack.

17 CHAIRMAN DAVID VICTOR: The questions
18 that have been raised about the damage or
19 scratching to the canisters, gouging, whatever
20 term one wants to use, there has been questions
21 raised about that on the canisters that were
22 lowered into the Holtec system. This here speaks
23 to the question of whether those canisters remain
24 fit for purpose?

25 RANDALL GRANAAS: Uh-huh.

1 CHAIRMAN DAVID VICTOR: It might be a
2 good idea to pull out the slides, you've got
3 several slides here to make -- pull them out as a
4 separate document, and we have a frequently asked
5 questions on the website, let's pull these slides
6 out, connect them to the frequently asked
7 questions, and actually help people find this
8 answer, because it's pretty deep in the weeds, and
9 I hear this question over and over again, and we
10 ought to be able to have a crisp answer to it.

11 RANDALL GRANAAS: Next slide, please.

12 LPI did note that limiting flaw depth to
13 0.0625 inches ensures a flaw will not penetrate
14 the 0.080 inch minimum deep compressive residual
15 stress provided by the laser peening of the weld
16 areas that we performed of the chloride induced
17 stress corrosion cracking or CISCC cannot occur --
18 lost it again.

19 CHAIRMAN DAVID VICTOR: Just speak
20 through it. Somehow it wakes up. It's like my
21 students at times.

22 RANDALL GRANAAS: I'll just keep speaking
23 next time -- could not occur at tensile stress.
24 Tensile stress is not present. That is it cannot
25 occur within the 0.08 inch minimum deep

1 compressive residual stress region.

2 SCE agreed with LPI's recommended 0.0625
3 inch threshold for canister repair because of
4 that. In practice we would mitigate a crack as
5 soon as it were detected. We wouldn't wait for
6 the crack to reach 0.0625 inches.

7 Next slide, please. Recommendation
8 number 2, LPI recommended use of an extreme value
9 statistical analysis rather than normal
10 distribution. SCE contends that normal
11 distribution is more appropriate, but we agreed to
12 this recommendation, and we plan on using both
13 methods to evaluate future canister inspection
14 results.

15 Recommendation number 3, assess how
16 future canister unloading operations. That is
17 when canisters are moved to a different location
18 can be optimized to minimize canister wear depths,
19 and we agreed to this recommendation, and we
20 partially addressed this recommendation improving
21 the alignment during the download process.

22 But we have no foreseeable plans to
23 perform unloading operations. There's no facility
24 to ship the fuel to, for example. The last
25 recommendation was to correct a typographical or

1 miscalculation error in a supporting document
2 related to the potential scratch depths on fuel
3 storage canisters. LPI they noted a minor error
4 in the statistical analysis related to potential
5 scratch depth, and that was corrected.

6 Next slide, please. So moving onto a
7 discussion of R&D. The genesis for meeting R&D in
8 the first place that occurred in 2009 when funding
9 for the Yucca Mountain Deep Geological Repository
10 was terminated, and that led to the realization
11 that spent fuel was going to be stored at reactor
12 sites longer than originally intended, possibly
13 much longer.

14 So as Jerry indicated, the current
15 research is focused on potential long term issues
16 associated within the extended storage and
17 transportation of spent fuel. Shortly after 2009
18 the first gap analysis was performed to identify
19 and evaluate potential long-term issues. So a gap
20 analysis compares the existing knowledge base to
21 credible aging mechanisms.

22 For example, fuel known as "high burnup"
23 was initially identified as a potential long-term
24 concern, but research performed since this first
25 gap analysis has alleviated the initial concerns

1 about high burnup fuel. So there are no immediate
2 or near term concerns about the safety of spent
3 fuel storage. SCE will report out on ongoing
4 research as it is completed.

5 And the R&D is being led by Department of
6 Energy, National Labs, universities, the Electric
7 Power Research Institute, and private industry.

8 Next slide, please. Here we have an
9 example of recently completed R&D. In this case
10 by the Electric Power Research Institute. And
11 EPRI's report described results of evaluating five
12 different potential canister shell mitigation
13 repair methods. So they looked at cold spray, arc
14 welding, inorganic coating, liquid metal, and
15 Geopolymer. And these methods were evaluated for
16 link tightness after sealing a lab-created CISC
17 cracks, a salt fog, which tests for sensitivity to
18 chloride-induced stress corrosion cracking, slow
19 strain rate testing, which evaluates the
20 effectiveness of a coating protecting a specimen
21 in a corrosive environment, electrochemical
22 corrosion, or corrosion between the dissimilar
23 metals, adhesion and atmospheric exposure.

24 Next slide, please. So arc welding, arc
25 welding performed well, but we currently don't

1 have a technology that will support remote
2 deployment of arc welding inside one of these
3 storage modules. The liquid metal was unable to
4 develop a sufficient bond, and the Geopolymer
5 coating had a relatively low strength, and it was
6 completely ineffective at ceiling stress corrosion
7 cracks.

8 CHAIRMAN DAVID VICTOR: Can I interrupt
9 for a moment?

10 Ted Quinn.

11 TED QUINN: I wanted to ask you on the
12 previous slide with EPRI.

13 RANDALL GRANAAS: Yes.

14 TED QUINN: EPRI Electric Power Research
15 Institute is important to us in a lot of ways,
16 they've been contributory in the past. Part of it
17 has to do with test versus analysis.

18 RANDALL GRANAAS: Right.

19 TED QUINN: Do you feel they have enough
20 test results that were implemented in this so that
21 the results were vetted to an extent that you feel
22 comfortable with?

23 RANDALL GRANAAS: That's a broad
24 question, generally they look for conformatory
25 data, they'll do analysis in the labs, and then

1 they'll go look for some sort of physical test.
2 Even from the high burnup fuel we think that's
3 done, it's settled, but there's still a
4 confirmatory test on what's going to be done on
5 the high burnup fuel demo cask to completely close
6 that loop.

7 TED QUINN: So to make it shorter, in the
8 future as we do more evaluation inspections, it
9 will contribute towards the data analysis that
10 will support more certainty?

11 RANDALL GRANAAS: That's correct. These
12 gap analysis, which are done by the Department of
13 Energy, EPRI has done them, even the international
14 arm of the Electric Power Research Institute has
15 done a gap analysis, it's great because they go
16 look at everything, and they say what do we really
17 need to learn and where should we do some more
18 research and where do we need to do testing, and
19 then that gets published and then it gets acted
20 upon.

21 CHAIRMAN DAVID VICTOR: Can I press on
22 that, because I'm competing with the seagulls for
23 the microphone here, seems like there are two
24 different issues here, one is about the integrity
25 of the fuel rods, that's the issue of the high

1 burnup fuel, the HBF, which this panel has been, I
2 don't know, five or six years ago, spent a lot of
3 time talking about this question, about whether
4 high burnup fuel would be somehow more brittle and
5 so on, that's one issue.

6 A very different issue is the issues on
7 the screen here, which is what do you do to the
8 outside of the canister in terms of a repair. So
9 the statement that you made about testing, the
10 state of testing, as true more true, less true for
11 the canister repairs? Because I think most of the
12 questions we've had from the public don't have to
13 do with the integrity of the fuel rods, few here
14 and there, they have to do with the integrity of
15 the canisters.

16 RANDALL GRANAAS: The integrity of the
17 canisters is probably the primary research right
18 now. The high burnup fuel it's almost done,
19 right. Their in the confirmatory. Now they're
20 looking at how they age, the canisters, which is
21 not just how to fix it, but how they age, and
22 maybe how to predict it, right.

23 So CISCC is slow occurring and may never
24 occur at all, but the goal of it is maybe to be
25 able to predict it based on site conditions or

1 other things that we can measure or something,
2 right.

3 CHAIRMAN DAVID VICTOR: Can I just two
4 things on this -- sorry, is there more on this
5 point?

6 JERRY STEPHENSON: I was going to add for
7 EPRI doing their testing on the cold spray, we
8 sent a representative to observe their testing,
9 because they were replicating what we've done, and
10 although they chose to test several other things,
11 they're very rigoursly scientific, not just
12 jumping to conclusion because SONGS has done it.
13 And their testing was observed by us.

14 CHAIRMAN DAVID VICTOR: Full disclosure,
15 I do a lot of work with Electric Power Research
16 Institute, not on this subject at all but on
17 renewable power, climate change, things that I
18 work on. This is not an area where I interact
19 with them except through this panel.

20 I think I want to emphasize something
21 which I think is where Ted was heading with his
22 question, which is we need to keep our eyes on
23 making sure that lots of options are on the table.
24 Everyone is excited right now about cold spray.
25 Testing seems to suggest that that's the right way

1 to go, but we benefit from more options within
2 reason.

3 Can I -- I was asked to go to Sandia
4 National Labs and give a talk, which I'm doing in
5 early September, maybe I could ask Ted and Randall
6 offline, could you -- I'm going to talk about
7 climate change, but if they asked me if there's
8 anything we want to know from them about what
9 they're doing in other areas, maybe we can put
10 together a list of questions we could give them,
11 because I think they're doing some high burnup
12 fuel testing and --

13 RANDALL GRANAAS: They are. They're
14 involved in a lot of research.

15 CHAIRMAN DAVID VICTOR: We don't need to
16 do this right now, but let's get as much
17 information out of them as we can, because I'm
18 going to show up there and spend all day there
19 with them.

20 RANDALL GRANAAS: As a matter of fact
21 myself and other people from our staff went to
22 Sandia about a year ago.

23 CHAIRMAN DAVID VICTOR: Okay. We'll all
24 meet each other in Albuquerque and have Mexican
25 food.

1 RANDALL GRANAAS: Exactly.

2 CHAIRMAN DAVID VICTOR: Great. Back to
3 you.

4 RANDALL GRANAAS: I think I was at the
5 nonmetallic Restochem organic coating that had the
6 best overall performance, and that was selected
7 for further evaluation and development. There are
8 some issues with adhesion, so that needs to be
9 worked out before this is really ready for prime
10 time.

11 But the cold spray metallic overlay, as
12 Jerry pointed out, was still found to be the
13 leading mitigation and repair method. And so as
14 David was kind of hinting at, generally the
15 method, or generally speaking, the idea is to cast
16 a wide net and then whittle down the population
17 based on which methods offer the most promise.

18 Now on this particular example the only
19 new technology identified that may have the best
20 promise is the Restochem inorganic coating. As
21 David pointed out, more options are better, so
22 that's why we're monitoring this research and
23 assisting with this research when we can, but we
24 don't necessarily -- we want other options besides
25 cold spray that are available. There may be other

1 options or advantages of other approaches.

2 CHAIRMAN DAVID VICTOR: I think it would
3 be a good idea at some point for us to get a table
4 that says these are different repair options,
5 what's the state of play, because I still don't
6 really -- this is an issue down the road, because
7 there have been all these inspections of all these
8 canisters across the industry, the same canisters
9 that we're using here, and nobody has found any
10 issues so the question of "the need to repair" is
11 still hypothetical, but at some point it may arise
12 and when we want to make sure we're ready, and I
13 don't still don't have a good feel, maybe others
14 do, for where all these different options are and
15 how far they're advancing, kind of what the state
16 of the industry is.

17 RANDALL GRANAAS: Okay. I think I'm
18 ready for the next slide. As we discussed at
19 previous meetings, SCE is leading the industry in
20 defense-in-depth and inspections. We specified a
21 thicker shell for our canisters, that is the 5/8
22 inch versus the nominal 1/2 inch.

23 We specified the more corrosion resistant
24 material for the canister confinement boundary
25 shell, that's the 316L versus the 304 stainless

1 steel. We specified a higher seismic rating for
2 our dry storage systems used at SONGS, that's 1.5G
3 horizontal, and we laser-peened the weld areas of
4 the Holtec dry storage canisters, which
5 essentially eliminates the potential for CISCC.
6 Without the tensile stress you cannot have
7 cracking.

8 And next slide, please. SONGS's
9 inspection and maintenance program for the Holtec
10 system exceeds NRC requirements, and we're the
11 only site in the U.S. inspecting a dry storage
12 system during the initial 20 years of operation.
13 Our heated test canister, we didn't talk about
14 that tonight, but that's another first of a kind,
15 and it's a leading indicator of canister
16 corrosion.

17 Our SONGS NUHOMS system is being
18 inspected for an NRC-approved aging management
19 program. An SCE developed metallic overlay, which
20 we mentioned several times tonight, is a first of
21 a kind to remotely repair a crack in the canister
22 confinement boundary in the unlikely event if we
23 did have a crack.

24 And we did an alternate inspection ring
25 for the NUHOMS system, once again, another first

1 of a kind, which has enhanced inspection repair
2 capability.

3 All right. Next slide, please. So SONGS
4 will be inspecting the heated test canister in the
5 spring of next year, 2024, and two Holtec MPCs
6 loaded with fuel will also be inspected in the
7 spring of next year.

8 And two NUHOMS canisters were inspected
9 in 2021, so the next inspection for this system
10 will occur in 2026 based on a five-year inspection
11 interval.

12 And since our last defense-in-depth
13 presentation two canisters were inspected at
14 Oyster Creek and Holtec HI-STORM 100 systems at
15 five sites are slated for inspection before the
16 end of this year, 2023.

17 Next slide, please. And we show this
18 graphic during last year's defense-in-depth
19 meeting, and now it's been updated to show the two
20 additional canisters inspected at Oyster Creek.
21 The count is now 44 canisters inspected at 14
22 sites, although that's not necessarily 44 unique
23 canisters. Some canisters have been inspected
24 more than once.

25 All right. Next slide. And this is the

1 last slide. We talked about, kind of hinted at
2 this tonight, that SCE is participating in a
3 number of industry forums related to dry fuel
4 storage and transportation. First, there's the
5 EPRI Extended Storage Collaboration Program, what
6 we call ESCP. The membership includes utilities,
7 regulators, universities, Department of Energy,
8 National Laboratories, research organizations,
9 vendors, International Atomic Energy Agency,
10 Nuclear Energy Institute, Nuclear Waste Technical
11 Review Board and others.

12 As of 2021 there were 750 members from 22
13 countries. And we cochair the mitigation and
14 repair subcommittee. We're also a member of the
15 NEI Storage Task Force, the NEI Used Fuel
16 Transportation and Consolidated Interim Storage
17 Task Force, the ASME Task Group for Mitigation and
18 Repair of Spent Nuclear Fuel Canisters, the TN
19 Users Group for the NUHOMS system and the Holtec
20 Users Group for our UMAX system.

21 That's it. That's all I have. Turn it
22 over to Jerry for any -- questions first?

23 CHAIRMAN DAVID VICTOR: Yeah, we have a
24 few questions from the CEP, and then we'll take a
25 short break, but Dan Stetson, the floor is yours.

1 DAN STETSON: Thank you.

2 Randall, I remember touring the Holtec
3 manufacturing plant, and actually there's very
4 impressed by the whole peening process, so we know
5 that those are done on the Holtec canisters. Are
6 they done on the other canisters as well?

7 RANDALL GRANAAS: No, only the Holtec
8 canister have been peened, only the Holtec
9 canisters. The NUHOMS canisters, they're not
10 peened, no, and neither are the GTCC waste
11 canisters.

12 DAN STETSON: Why are those did not have
13 the peening process?

14 RANDALL GRANAAS: For the fuel canisters,
15 it -- let's see if I can figure a better way of
16 saying this, but the radiological risk is already
17 low from a fuel canister, but it's really low from
18 a GTCC waste canister. So at some point would it
19 be practical? Would it be a good -- how would
20 you -- good use of the Decommissioning Trust Fund
21 to peen those welds? And we didn't think it was,
22 right, to spend the money to peen those welds.

23 DOUG BAUDER: I think also, Dan, to
24 partially answer your question, for the AREVA TN
25 system, the horizontal system, those canisters are

1 not peened.

2 DAN STETSON: Right.

3 DOUG BAUDER: The Holtec canisters are,
4 in fact, some of it has to do with progression in
5 learning and technology over the years, and layers
6 of defense-in-depth. I believe the peening was
7 introduced here at a CEP meeting I'll say four or
8 five or more years ago, and a series of
9 recommendations were introduced there, and the CEP
10 aligned around we should go do this.

11 Actually, I think the challenge was part
12 of the reason that the laser peening was done on
13 the Holtec system. I will also say the time that
14 we did the laser peening for the Holtec system, we
15 did not understand the ability that we would have
16 to progress technology for robotic inspections.
17 It wasn't there yet, in fact, we were part of the
18 team that developed that and so in hindsight, if
19 we knew we would be able to do the robotic
20 inspections to the extent we can, would we have
21 done the peening, I don't know. But I do know
22 that the peening is an additional defense-in-depth
23 mechanism that is all part of the big picture.

24 DAN STETSON: Thank you. I was really
25 amazed at the integrity of the process. I mean,

1 because I think these are also used on the high
2 tech fighter planes, correct, the peening process?

3 RANDALL GRANAAS: It is. Another reason
4 why you could -- we didn't peen the
5 Greater-Than-Class C waste canisters, the helium
6 is important inside the canisters when you have
7 the fuel and provides part of the cooling, and it
8 also prevents the fuel rods from corroding.

9 If you get a crack in a GTCC waste
10 canister, it's just garbage, right. So it's not
11 like you have to protect the integrity of the
12 spent fuel like you do with the spent fuel
13 canisters.

14 CHAIRMAN DAVID VICTOR: Before I go to
15 John Taylor for the next comment from the CEP,
16 there are two separate issues here: One is the
17 canister system for the Greater-Than-Class C.
18 That's some of the AREVA TN horizontal system, but
19 there are also many fuel rods in the horizontal
20 system.

21 So I think this whole peening discussion
22 is about canisters that contain fuel rods. My
23 understanding from -- I went to that same visit,
24 and I remember a couple things from that visit,
25 one is that the visit was in Pittsburgh, and I

1 landed in Philadelphia, and it turns out they're
2 not next to each other. That's a long drive. But
3 the other thing I remember from that discussion
4 was how the peening technology, at least because
5 the people were there doing the peening, so it's a
6 separate contractor that was doing the peening,
7 that my impression was that they were not -- would
8 not have been ready at the time that your
9 horizontal system was built.

10 RANDALL GRANAAS: I believe that's true.
11 I'm certain it's true. Really nobody was talking
12 about peening when we were loading those canisters
13 when we started in 2003. It just wasn't even part
14 of the conversation.

15 JERRY STEPHENSON: Back then it would
16 have been done with BBs rather than with laser.

17 RANDALL GRANAAS: In 2003, this was part
18 of the 2009, everything changed in 2009. I say
19 everything changed, it became different. Up to
20 2009 everybody assumed that the Department of
21 Energy was going to start taking fuel, so these
22 canisters were going to be onsite 15, 20 years,
23 25 years. After 2009 you get the impression
24 they're going to be here a really long time, we
25 look at the Holtec system, we say maybe we should

1 peen these walls they may be here longer than we
2 thought they would be.

3 CHAIRMAN DAVID VICTOR: One implication
4 of this conversation is that the critical systems,
5 the ones that are really on the front lines of the
6 horizontal systems, it's older, it's not peened,
7 you need to do inspections on all of them, but
8 those are the ones we really pay attention to.

9 John Taylor.

10 JOHN TAYLOR: Could you explain a little
11 bit about the heated test canister inspection
12 that's coming up? Is that something new, or is
13 that something you just do over certain period of
14 time?

15 RANDALL GRANAAS: That's one of the
16 things we do per the inspection and maintenance
17 program. Per that program we inspect the heated
18 test canister every two and a half years, and we
19 inspect two canisters loaded with fuel every five
20 years.

21 So that program really started in 2019 so
22 we already looked at the heated test canister two
23 and a half years ago, two years ago, looked great.
24 The patch we put on with cold spray looked really
25 good. So this is per our schedule, we're going to

1 look at it again in 2024.

2 JOHN TAYLOR: Thank you.

3 CHAIRMAN DAVID VICTOR: Is it directly on
4 this topic Jerry?

5 JERRY STEPHENSON: I wanted to point out
6 while we left it open that we hadn't peened the TN
7 canisters that were made long ago, we did recently
8 inspect two of them. We found them to have no
9 damage, no corrosion, they looked brand-new, so we
10 have verified that they are not suffering
11 corrosion while not in the peened condition.

12 CHAIRMAN DAVID VICTOR: Indeed it's my
13 understanding, as not somebody who is in the
14 industry but now thanks to this volunteer job
15 following the industry very closely, that if you
16 go back to the previous slide -- it's easier said
17 than done -- if you go to that, look at this
18 slide, that's been the result at every single one
19 of these tests, these inspections, is that
20 everyone across the industry -- this is one the
21 reasons why it's so important to be using the same
22 technology that everybody else in the industry is
23 using, so that all of these International Atomic
24 Energy Agency efforts, EPRI efforts, NEI efforts,
25 all of these team efforts can really operate as a

1 team, and we benefit from that. It's incredibly
2 important to be in the pack for something like
3 this. Sometimes in life it's important not to be
4 in the pack. This seems like it's pretty
5 important to be in the pack.

6 Any other questions before we take a
7 break here?

8 Let me go to Doug, and see if there's
9 anything else you want to say before we take a
10 break?

11 DOUG BAUDER: No. Just that there was
12 maybe one thing, there's a lot of discussion
13 around the Greater-Than-Class C canister in the
14 system, why is it different and so on, and I think
15 the pictures Randall put up were great. If you
16 think about it as a Russian doll, so you have the
17 furniture inside the liner, the liner goes inside
18 the canister, and the canister is moved inside of
19 a cask.

20 So you have four components there. Why
21 all that compared to a fuel canister? The reason
22 is when we cut up the reactor vessel internals,
23 they're just pieces, pieces of metal. So they go
24 inside the furniture so that they're positioned so
25 they can protect against damage to the liner.

1 Then the liner is a layer of defense as it goes
2 into the canister, and that whole thing is welded
3 closed, and then shipped over and handled like a
4 canister of fuel.

5 A lot of the technologies is the same,
6 but it's also very different to protect the
7 system.

8 CHAIRMAN DAVID VICTOR: Okay. Excellent.

9 So we're going to take a five-minute
10 break, but before we do that, can we go to the
11 slide that talks about how to --

12 DOUG BAUDER: Looks like Martha has
13 her --

14 CHAIRMAN DAVID VICTOR: Oh, Martha, I'm
15 sorry, Martha, the floor is yours.

16 MARTHA McNICHOLAS: I hope my mic is
17 working.

18 CHAIRMAN DAVID VICTOR: It's working.

19 MARTHA McNICHOLAS: Sorry.

20 CHAIRMAN DAVID VICTOR: They had to lower
21 the volume here. The seagulls are gone.

22 MARTHA McNICHOLAS: Okay. I just wanted
23 to -- I'm impressed with the sharing of inspection
24 information across so many different facilities,
25 and I appreciate the pictures and that really

1 helped the illustration, the difference between
2 the liner and the casks, so all just good
3 comments.

4 RANDALL GRANAAS: Martha, I could add one
5 comment about the sharing, and that's actually a
6 requirement of the NRC that puts for us when we go
7 to the license renewal there's a database where we
8 have to share all of our inspection results, so
9 yes, we all have access to everyone else's
10 inspections.

11 CHAIRMAN DAVID VICTOR: It is safety in
12 the pack.

13 Okay. If we go to slide --

14 MARTHA McNICHOLAS: Thank you.

15 CHAIRMAN DAVID VICTOR: Thank you, Martha
16 for that.

17 Go to slide 38, please. I want to remind
18 everybody if you want to make a comment, and
19 you're here in the room, fill out one of those
20 cards, we'll put you on the list. If you're not
21 here in the room, click on -- it should be in the
22 chat of the Teams site, click on the link, and you
23 can put your name in there, and you end up on a
24 list that shows upon the computer here, it's an
25 amazing system. And we're going to take a

1 five-minute break, and we're going to go back to
2 public comment, the first public comment is going
3 to be from Paul Blanch who is online. When we
4 come back after five minutes, Mr. Blanch will be
5 first for his three-minute comment.

6 (Recess taken from 7:52 until 7:57.)

7 CHAIRMAN DAVID VICTOR: Paul Blanch, the
8 floor is yours.

9
10 PUBLIC COMMENT

11
12 PAUL BLANCH: Thank you very much,
13 Dr. Victor.

14 I had sent some questions to the CEP and
15 Southern Cal Ed, and I just want to report some
16 progress. For those who don't know me, I'm was
17 the a registered professional engineer in the
18 State of California. I've got about 60 years of
19 nuclear experience. All the work I'm doing on
20 this effort I am doing on my own time, my own
21 nickel, including travel, not being compensated or
22 tied to any particular organization.

23 Certainly in the three minutes allotted,
24 maybe this is not the appropriate time or place to
25 discuss any technical issues, so I received a call

1 yesterday from Mr. Camargo and we had a few very
2 good conversations, and we're almost in agreement
3 that I am going to come out to Southern California
4 Edison to the site, and with me I'm going to be
5 bringing probably the world's most renowned
6 expert on nuclear safety. That's David Lochbaum.
7 He's agreed to attend by phone with Mr. Camargo
8 and some of his engineers, and they'll be two
9 other people.

10 Again, we're all just concerned about
11 safety, we're not tree huggers, we're not
12 anti-nukes, we are concerned about safety. And
13 our main issue is the potential of flooding and
14 the recovery of flooding. And just before I tuned
15 in tonight I was watching Erin Burnett, you
16 guys -- I'm on the East Coast, you have a first
17 hurricane moving in. She said this will be the
18 first hurricane California has had in 165 years.
19 So I'm sure you people out there are paying
20 attention to it.

21 I'm very encouraged the fact that
22 Mr. Camargo has reached out, and we will have an
23 engineer-to-engineer discussion with myself and
24 Dave Lochbaum and a couple of other interested
25 parties that have been involved for more than ten

1 years on these issues.

2 In closing I want to thank Mr. Camargo.
3 If he sees fit to invite any of the CEP members, I
4 certainly would not oppose it. I think it's going
5 to be very, very productive meeting and very
6 optimistic, and I got eight seconds left, and I
7 want to say thank you very much for your time.

8 CHAIRMAN DAVID VICTOR: Thank you very
9 much, Mr. Blanch.

10 Let me just mention, since we're on the
11 subject here, this is one of the things the CEP is
12 supposed to do, which is -- and hopefully does
13 well -- which is people raise questions, sometimes
14 the questions we can get answered in these
15 meetings, sometimes they need a longer discussion.
16 I think it's terrific that you have this meeting
17 being set up.

18 I also want to applaud engaging Dave
19 Lochbaum. Dave Lochbaum has been a friend of the
20 CEP. Those of you that remember May of 2020 I
21 believe first ever nonclassified discussion of
22 terrorist threats to ISFSIs and had a long
23 meeting, very thorough discussion, and Dave
24 Lochbaum was one of the people very heavily
25 involved in that real contribution. I'm glad he's

1 involved.

2 Let's make sure the CEP stays informed
3 about this meeting in case anybody else wants to
4 sit in and listen and ask questions.

5 Second I want to go to Nina Babiarz who
6 is online then after Nina, we're going to go to
7 Van Snider, who I believe is here in person. In
8 person is going to be up there. Online is going
9 to be online.

10 And the floor is yours, Nina Babiarz.

11 NINA BABIARZ: Can you hear me?

12 CHAIRMAN DAVID VICTOR: Loud and clear.

13 NINA BABIARZ: Thank you.

14 There was a PowerPoint bullet earlier
15 indicating that an assertion was made during the
16 last CEP meeting that Southern California Edison
17 was not implementing all of the inspection and
18 maintenance program recommendations by LPI, I was
19 the person that made that assertion.

20 If Southern California Edison sold a bill
21 of goods to the California Coastal Commission and
22 its staff that the difference was a difference of
23 opinion, no wonder they went ahead and approved
24 it.

25 The fact of the matter is the difference

1 is the difference between the accurate and
2 inaccurate. I'm quoting from the LPI executive
3 summary of that report, however, an item of note
4 was associated with the statistic evaluation
5 performed to predict the maximum bound depth of
6 the scratches. These analysis performed a normal
7 distribution to predict. It goes on to say that
8 the normal distribution is not appropriate for
9 predicting maximum flaw depths as is done via
10 extreme value statistics.

11 The application of a normal distribution
12 underpredict, underpredicts the maximum flaw depth
13 and the probability of finding of flaw depth
14 greater than the bounding flaw depth. The report
15 goes on to say that LPI recommended, therefore,
16 that the statistical analysis be revised by
17 Southern California Edison to reflect a more
18 appropriate distribution method, and it also goes
19 on to the say that the employing of extreme value
20 statistic will predict this 95 percent probability
21 of the bounding flaw depth.

22 Furthermore, unloading operations
23 employed for future removal should also be
24 assessed and modified as appropriate to minimize
25 the gouge wear depth.

1 I think at the onset of this meeting
2 Dr. Victor had the audacity to indicate that the
3 cans weren't damaged. If the cans weren't
4 damaged, which of course is on record with the
5 Nuclear Regulatory Commission, why would they be
6 measuring the depth of gouges?

7 So, you know, let's take a little time to
8 be truthful here. The LPI report clearly states,
9 and Edison decided to use both. Why? I can only
10 conclude with common sense that that would be to
11 confuse and conflict and conflate the data of the
12 depth of the gouges we know that are damaged on
13 those cans.

14 Thank you very much.

15 CHAIRMAN DAVID VICTOR: Thank you very
16 much for your comment.

17 We're next going to go to Van Snider.
18 Sir, you stand up there the microphone turns on
19 miraculously and the timer counts down.

20 VAN SNIDER: Is this working? Yeah.

21 Some of what I have to say some will
22 know, and some will be a little bit orthogonal to
23 you, the immediate topic for today's discussion.
24 When I learned that the SONGS plant was to be
25 closed, I sent the e-mail to the only portal I can

1 find to Southern California Edison to suggest that
2 they ought to replace it with a nuclear waste
3 destruction facility, and I hoped this would peek
4 some interest and somebody would say, what do you
5 mean, but the response I got was, uh? And when I
6 tried to get through I was met by silence.

7 What I meant by that was that rather than
8 destroying the facility completely, you should put
9 three 360 megawatt reactors in each dome along
10 with a power electric refining facility with the
11 capacity of 40 tons per year and destroy your
12 waste. But I didn't get anywhere with that.

13 Now as you all know, this stuff that we
14 call nuclear waste isn't waste at all. 95 percent
15 of it is very valuable unused fuel. 5 percent of
16 it is fission products, and of those fission
17 products, 9.26 percent are Strontium and Cesium,
18 which need custody for 30 years. 0.54 percent is
19 the Europium, which needs custody for 85 years,
20 half the rest is innocuous for 30 years. The
21 other half isn't even radioactive.

22 You ought to separate the fission
23 products from the unused fuel, sell the fuel, and
24 only sequester the fission products. General
25 Forsberg at MIT (Massachusetts Institute of

1 Technology) said if you do that, the facility is
2 less than 15 percent the size of what you would
3 need otherwise, much less. In fact, you could put
4 the Cesium and Strontium into salt divers, dump
5 them into the six and half kilometers deep salt
6 dumps in Louisiana and never see them again.

7 What SONGS should do, in my opinion,
8 maybe SONGS won't, but somebody else should, is to
9 build a 400 tons per year power electric
10 processing facility, which Argon and Merit
11 Corporation have costed out at \$911 million
12 capital investment, 90 million a year. If you
13 finance that over 30 years at 5 percent, you're
14 operating costs would be 0.03 cents per kilowatt
15 hour. Assuming you can sell the fuel.

16 And then if you can get the rhodium and
17 palladium out of that, you can actually make a
18 profit without charging a fee for anything. That
19 would be finished with your fuel in four years.

20 Now, if you can just keep it running,
21 because you won't build a plant that you plan to
22 throw away in four years, you can keep it running,
23 and you can start selling your service to Diablo
24 Canyon and Rancho Seco, Palo Verde, the Washington
25 Nuclear Generating Station anybody willing to send

1 you the stuff that you can process. Maybe you'll
2 even make a profit if you can figure out how to
3 get the palladium and rhodium out.

4 CHAIRMAN DAVID VICTOR: Excellent. Thank
5 you very much for your comment.

6 When we get to the answers part of this,
7 typically the questions are put to the folks at
8 Edison. I'm going to ask maybe we could put that
9 question also to Ted Quinn, and I'll say a couple
10 words about this issue of reprocessing, because
11 it's coming back on the political agenda.

12 Next I want to just quickly check and see
13 James Nogle, are you here in the room? Did you
14 want the floor?

15 No. Does Mr. Nogle want the floor?
16 After that we're going to go to Alice McNalley,
17 and we'll come back and see if we can find Alice
18 McNalley online.

19 Kalene Walker is online.

20 The floor is yours.

21 KALENE WALKER: If you can open my mic
22 when you answer my questions, that would be
23 helpful. Sometimes you don't understand my
24 questions, and I would like to be able to clarify.

25 Am I coming through clearly?

1 CHAIRMAN DAVID VICTOR: Can you say that
2 again.

3 KALENE WALKER: I was asking -- I'm
4 hearing an echo.

5 CHAIRMAN DAVID VICTOR: You're hearing an
6 echo.

7 KALENE WALKER: Can you hear me clearly?

8 CHAIRMAN DAVID VICTOR: We can hear you
9 clearly, yes.

10 KALENE WALKER: Do you think you can
11 start my clock again?

12 CHAIRMAN DAVID VICTOR: Sure. Happy to
13 do that.

14 KALENE WALKER: Question number 1: What
15 type of radiation monitor does Edison use when
16 measuring radiation streaming from the air vents?
17 I would like to know the make and model. The NRC
18 tells us what make and model they use. I would
19 appreciate an answer on that.

20 I question your definition of
21 defense-in-depth. According to the NRC glossary,
22 defense-in-depth is an approach of designing and
23 operating facilities that prevents and mitigates
24 accidents. It's a multiple independent and
25 redundant layers of defense to compensate for

1 potentially human error mechanical failure.

2 So having a better design is not a
3 defense-in-depth. It's having a system that can
4 prevent in the event of canister failure what do
5 you do. At this point the only defense-in-depth I
6 see is evacuation, I'm sorry.

7 Three months after the August 3rd
8 incident at an NRC commissioner's meeting,
9 Commissioner Wright asked an NRC engineer
10 Christian Araguas the status of the ability to
11 inspect and repair canister cracks. Araguas
12 admitted they have no ability to inspect canisters
13 for cracks, they have no ability to detect the
14 flaws or understand or characterize the flaws. He
15 did not respond to the question of repair.

16 The repair technology that Edison
17 promoted to the Coastal Commission was never
18 evaluated or approved by the NRC or ASME. They
19 were misled. An EPRI in 2021 said that nickel
20 spray repair could not be counted for structural
21 integrity or helium containment. It is a false
22 solution. You've misled the public.

23 The inspection word you should no longer
24 use. It is a visual assessment. Visual
25 assessments cannot find cracks or assess them.

1 But your visual assessment did find carbon
2 particle embedded into the surface of the
3 canisters. This would be cause for immediate,
4 reassessment and evaluation of what to do with pit
5 corrosion cracking that could have been initiated
6 upon delivery of the canisters on the site, just
7 about every Holtec canister unavoidably scraped
8 and gouged.

9 I wish that the people advocating for
10 policy change, for law changes, for changing in
11 the Nuclear Waste Policy Act would go to a nuclear
12 waste technical review board meetings and listen
13 to the technical details. Go to the NRC meetings,
14 and listen to the technical details and read the
15 technical stuff. You're misleading the public and
16 it's extremely dangerous.

17 Thank you.

18 CHAIRMAN DAVID VICTOR: Thank you for
19 your comment. Can we go back now and see if we
20 can locate Alice McNalley. Is she online?

21 Maybe we can send a short e-mail to her,
22 let's start getting some answers to the questions
23 that have been raised so far, and then you can let
24 me know if she wants to join the meeting online.
25 I want to make sure we get her comments.

1 I will say she's put them on the screen
2 here, and for the benefit of the public, summarize
3 them. "With the hurricane headed this way your
4 denials of the storm or Tsunami blocking the
5 cooling vents with water, sand, seaweed, and
6 debris seem ever more baseless. Your defense of
7 nuclear waste is a joke as you do not follow NRC
8 regulations, instead you apply for waivers and
9 exemptions contributing to possible overheating of
10 the nuclear waste. Why not put safety ahead of
11 profit?"

12 I think the question there with regard to
13 flooding and blocking the canisters resonates very
14 much with the questions that were raised by
15 Mr. Blanch in his comments as well.

16 I'm going to now give the floor to Dan
17 Stetson and Martha McNicholas who are going to
18 lead the answers to the questions that we can get
19 here and also what's the process for getting
20 answers to things that can't be answered on the
21 spot.

22 Dan.

23 DAN STETSON: Thank you, David.

24 First of all, I would like to always
25 suggest and recommend if you do have a question

1 it's much better if you could put them in writing
2 online so that we can accurately communicate them.
3 As you know, it's difficult to hear some of the
4 things. In the future if you can, put them in
5 writing in advance, that is much more helpful.

6 Martha, you want to join me here, and I'm
7 going to take the first one, if I may, we heard
8 from Paul Blanch, but he also had a few questions.
9 So I'm going to read off the questions, and then
10 we're going to ask SCE to go ahead and answer
11 those, if we may.

12 The first question is, "Is there an
13 emergency plan for flooding in place at SONGS?"

14 Question number 2, "Would this be
15 considered a site area emergency."

16 Question number 3, "May we have access to
17 a copy of the emergency plan regarding this
18 matter?"

19 4, "Why is this event only analyzed for
20 eight or 32 hours?"

21 Finally, "how long would it take to
22 restore air cooling for 73 canisters?"

23 DOUG BAUDER: First, let me say I would
24 like to thank Paul for his challenge and Manuel
25 Camargo for helping set that up, along with

1 others. We welcome an engineering-to-engineering
2 meeting at the station. I believe that the
3 questions that Paul has will be handled in more
4 depth at that meeting. They're here in print too,
5 so I think that's a good time to talk about that.
6 I'll hand that off to Jerry and Randall to
7 discuss.

8 JERRY STEPHENSON: Sure. I'll address
9 it. So first question is there emergency plan for
10 flooding in place at SONGS? Of course there's an
11 emergency analysis for flooding. We have a very
12 thorough analysis, and it concludes that the
13 highest water level during a Tsunami will never
14 breach the wall, so it will stay dry.

15 And the highest water level during the
16 Thousand Year Flood will never reach the Holtec
17 ISFSI pad, miss it by about 10 feet.

18 So we do have emergency classifications
19 at SONGS, but the only two that are left are
20 unusual event and alert, because there's no way to
21 generate the NRC-defined conditions for a site
22 area emergency or general emergency. The question
23 would this be a site area emergency? Their answer
24 is no, there are no site area emergencies at
25 SONGS.

1 Could you have an access to a copy of the
2 emergency plan? Well, yes, but it won't address
3 this because this is beyond design basis, okay.
4 Things that are within the design basis are
5 addressed. We've talked about this quite a bit,
6 and it always makes me uncomfortable to talk about
7 things beyond design basis, because the more you
8 talk about them, the more they sound like they
9 actually could happen.

10 This is not something that can happen.
11 It's beyond the design basis, kind of like, you
12 know, the accident that occurs when the moon
13 crashes into the earth, that's beyond design
14 basis. So we don't analyze for that

15 Why is it analyzed for only eight to
16 32 hours? Eight to 32 hours are tech spec
17 numbers, they would apply to a tech spec event.
18 This hypothetical event --

19 CHAIRMAN DAVID VICTOR: Can you just say
20 what a tech spec is.

21 JERRY STEPHENSON: Technical
22 specifications are the technical requirements
23 given to us by the NRC as part of our license,
24 so --

25 CHAIRMAN DAVID VICTOR: Those are for

1 things that are -- that could happen that are
2 designed basis events?

3 JERRY STEPHENSON: That the NRC thinks we
4 need to address in any event.

5 CHAIRMAN DAVID VICTOR: Not everybody
6 speaks tech spec.

7 JERRY STEPHENSON: Thank you, David.

8 Since these are beyond design basis, we
9 wouldn't be addressing them as part of the tech
10 spec, we would be solving a technical issue, you
11 know, that we would have to have been be kind of
12 like solving with our engineering know-how, rather
13 than just following a recipe in a technical
14 specification.

15 What we would do is we would keep it wet,
16 because water is a much better heat transfer
17 material than air. And how long would we have to
18 do this? We would have as long as it takes. We
19 would keep it flooded, we'd have no shortage of
20 water, we would use fresh water, not salt water.
21 There's been some suggestion if we kept flooding
22 it with salt water, it would rock up with salt.
23 We wouldn't do that. We would use fresh water,
24 and eventually we would come up with a plan.

25 We'd have lots of engineering help, we'd

1 have lots of help from the NRC, we would bring in
2 third-party consultants, we would mobilize a
3 tremendous effort in an extreme situation like
4 that.

5 I think that's all the questions.

6 DAN STETSON: Thank you.

7 MARTHA McNICHOLAS: Dan, I think that
8 also answers Alice McNalley's questions about the
9 hurricane and Tsunami and storm.

10 JERRY STEPHENSON: For that I can add
11 that the Hurricane Hillary will not generate more
12 storm surge than assumed in our flooding analysis.
13 Our Tsunami analysis assumes the Tsunami happens
14 concurrently with a storm and the full moon and
15 the high tied. So once again, it's all bounded.
16 I'll leave it at that.

17 DAN STETSON: Thank you, Jerry.

18 Martha, do you want to go ahead and run
19 with the next one.

20 MARTHA McNICHOLAS: I think that was from
21 Nina Babiarz, and that was about implementing the
22 IMP recommendations, and I think we talked about
23 that in the presentation, but I wanted Jerry to
24 maybe kind of reiterate that the difference in the
25 statistical modeling had been implemented.

1 DOUG BAUDER: Let me say a few words
2 here. It might be helpful if, Julia, you can take
3 us back to slide number 26, and there is where
4 Randall discussed item number 2 at the top of that
5 slide.

6 RANDALL GRANAAS: So --

7 DOUG BAUDER: Wait, I'm at the wrong
8 slide number. Slide number 29.

9 This is interesting because Lucius Pitkin
10 introduced the concept of extreme value
11 statistics, which is actually a theory. It's
12 never been proven in real life, but it will
13 provide values that are bounding.

14 Randall was really careful in covering
15 this in that from an engineering standpoint we
16 didn't agree with the recommendation, what we did
17 did do is implement it. For our plans we're using
18 both methods, normal distribution, which is much
19 more accepted from an engineering standpoint and
20 also the extreme value bounding mechanism.

21 Randall was also careful to cover the
22 fact that to professionally agree with the
23 recommendation, but we still implemented it from
24 the report to the Coastal Commission. Actually, I
25 don't understand the nature of the question,

1 because it was covered in detail here, we've
2 covered it before in prior meetings. I wanted to
3 have it in writing, so everybody can see we
4 implemented these recommendations.

5 JERRY STEPHENSON: Doug, Nina was reading
6 from the LPI report, which had LPI's position in
7 it. Edison's position wasn't in it. The fact
8 it's in the report doesn't necessarily mean it's a
9 fact, it means it's LPI's position.

10 We spent many minutes, maybe hours
11 talking about this on the phone directly between
12 our experts and LPI's experts. And I respect LPI
13 tremendously, and they respected our experts
14 tremendously. It was a very productive
15 conversation, but we couldn't come to an
16 agreement. What we decided to do is implement
17 their more conservative recommendation.

18 CHAIRMAN DAVID VICTOR: I believe this is
19 analogous, statistically this is analogous to
20 what's going on with sea level rise analysis. We
21 have some typically normal distribution different
22 probabilities of out comes and what California has
23 been doing sampling the tail so the much more
24 extreme version. This, in effect, a version of
25 that. And I think the -- the key point here is

1 that whether or not you agree, you're implementing
2 the extreme tail analysis.

3 Back to you, Martha.

4 MARTHA McNICHOLAS: Actually, Dan, I'm
5 going to jump in here, because I want to hear
6 about Van Snider's comments about reprocessing. I
7 don't think I've ever heard any presentations on
8 that. So I really like to get -- I think that's
9 Vince and maybe David and Ted Quinn I think knows
10 about this.

11 VINCE BILOVSKY: Sure. I'll take first
12 crack at it. The reprocessing fuel to make new
13 fuel is not performed in the United States at a
14 commercial level. It's a standard procedure in
15 other standard process in other parts of the
16 world.

17 An executive order originally signed by
18 Jimmy Carter prohibits reprocessing in the United
19 States. The concern then, and perhaps still now,
20 is proliferation of nuclear weapons, although this
21 requires a lot more enrichment than reprocessing
22 for commercial nuclear fuel. With the political
23 wins pulling more positively on nuclear power,
24 reprocessing could happen in the United States but
25 would require a legal change to do so.

1 If you want to add anything, Ted.

2 TED QUINN: I want to add I like what Van
3 thought. I think there's a lot of positive
4 things. The history -- the business case has not
5 been there to go do it, in addition to some of the
6 regulatory that's been changed. We would like to
7 go do it, we think it has a great contribution to
8 the future, if you want to work on it separately,
9 I would like to work with you.

10 CHAIRMAN DAVID VICTOR: Let me mention
11 that one of the things you get as chairman of the
12 CEP, you get people e-mails with ideas about
13 things that could happen at this site here.
14 Everything I've heard from the Navy is they want
15 their land back.

16 So interesting as it might be to put a
17 reprocessing plant up here or reverse osmosis
18 desalination plant, or Disneyland of San Clemente
19 here, none of that is going to happen. The site
20 will be cleared off, the site will be given back
21 to the Navy, they're going to turn it back to Camp
22 Pendleton, and they're going to integrate it.

23 The question of reprocessing has become
24 very interesting politically, in part because of
25 the Russians, which until recently when they voted

1 themselves off the global island for other
2 reasons, the Russians were a significant part of
3 the global fuel supply. That's gone now.

4 Also, there are new reactor types, small
5 modular reactors use a different kind of fuel
6 which would benefit from some reprocessing
7 industry depending on the fuel cycle is organized.

8 We're seeing growing evidence that
9 politically adding reprocessing might actually
10 make it easier to remove spent fuel from a place
11 like San Onofre, not because reprocessing would
12 happen here, because reprocessing could happen at
13 places like interim storage facilities and that
14 would generate more value and more jobs and make
15 those facilities more attractive.

16 Will that happen? I don't know. But
17 that seems to be politically one of the possible
18 directions of travel.

19 Dan.

20 DAN STETSON: Thank you, David.

21 It was really interesting in the early
22 part of the CEP there was a meeting with a number
23 of folks, a number of them were scientists, I
24 remember one scientist getting up and speaking
25 about what we call waste, he said, I don't know

1 why we're calling this waste, this is extremely
2 useful, and there's a lot of potential energy left
3 in this.

4 In France they're reprocessing it. They
5 use -- 80 percent of the energy from -- in France
6 comes from nuclear power, and they're
7 reprocessing. As we've spoken here, we don't do
8 that here, and it's certainly not going to happen
9 at San Onofre. It was certainly interesting to
10 hear about that potential and maybe at some point
11 in time at another place that will take place.

12 So I'm going to move to the next question
13 and that's from James Nogle, and that is, what is
14 the status of the site characterization final site
15 survey?

16 And I think is Ron going to answer that
17 or is --

18 DOUG BAUDER: It's something that any one
19 of us can answer. The site characterization was
20 done --

21 DAN STETSON: Excuse me, what does that
22 mean, site characterization?

23 DOUG BAUDER: It's a study to evaluate
24 all the areas of the site to determine what the
25 cleanup requirements will be. It was done, and

1 then as areas of the site are cleaned up and what
2 we say decommissioned, or placed out of service,
3 final surveys are done in those areas. We've done
4 final surveys in the intake structure and other
5 areas the plant.

6 I would mention that for those final
7 surveys, we use a contractor approved by the NRC
8 to come in and validate the surveys, and then the
9 NRC themselves, Region 4, actually took
10 independent samples of the contractor's work.

11 Characterization is done and we're in the
12 decommissioning phase, which involves carefully
13 closing out these areas doing these final surveys.

14 Looks like Victor has a --

15 VICTOR CABRAL: I do have a question.

16 DAN STETSON: Victor, speak in here.

17 VICTOR CABRAL: Sorry about that.

18 Do we know what the base is requiring of
19 us to return it? Has that been fixed already.

20 DOUG BAUDER: Your question about what
21 the Department of Navy will desire --

22 VICTOR CABRAL: Yes.

23 DOUG BAUDER: -- final state, final end
24 state of the station? No, we don't know yet.
25 That will part of the licensed termination plan

1 that we will submit to the Nuclear Regulatory
2 Commission. We hope to get more granularity on
3 that, but it could come to the point where under
4 the NEPA process, National Environmental.

5 VINCE BILOVSKY: Protection Act.

6 DOUG BAUDER: -- Protection Act --
7 thanks, Vince -- NEPA that the Navy implements for
8 their final end state determination that is made,
9 and that could be at the point where the fuel is
10 removed from the station, and taking down the sea
11 walls is contemplated, because that's what those
12 decisions will have to occur in their finality.

13 DAN STETSON: So, Doug, if I understand
14 you correctly, we might not hear from the Navy
15 then in terms of what those requirements are until
16 after the fuel is moved out of here?

17 DOUG BAUDER: So the Navy could decide
18 earlier. The Department of Navy could say
19 officially this is what we want you to do for your
20 final end state. It hasn't occurred yet. We're
21 planning for the alternatives. We're taking the
22 site to 3 feet below grade, and we're doing the
23 cleanup what we do now what we call Phase 2 of the
24 decommissioning.

25 Then we enter the phase where the fuel is

1 safely stored, the site remains at a static
2 condition, and at the point when the fuel is
3 removed, then that will push sort of the
4 conclusionary part of it, which is what is the
5 Navy going to do under NEPA.

6 DAN STETSON: Go ahead, Victor.

7 VICTOR CABRAL: Isn't it better to get
8 answer from them sooner rather later? Sort of
9 push that, because if we say 3 feet and they say
10 no, we want 8.

11 DOUG BAUDER: So we're involved in a
12 series of ongoing studies about title effects, and
13 those title effects and how they would impact the
14 station when the sea walls are finally removed,
15 and that's going to be an important data point for
16 the Navy when they go through the NEPA process.

17 Some of this is a work-in-progress. What
18 we're doing is being good stewards of the funds
19 now, and put the site in the condition where that
20 determination can be made.

21 DAN STETSON: Does returning the material
22 back to the Navy, is it possible that you're doing
23 it in sections, or are they going to wait until
24 all at once?

25 DOUG BAUDER: We are doing it in

1 sections. For example, we call the Mesa, the land
2 across Route 5, we returned most of that back. We
3 also will likely reduce our license footprint as
4 even right after this Phase 2 part of
5 decommissioning for areas of the plant that we
6 will never need or use again on this parcel that
7 we're in right now, but those are things we'll
8 decide as we move forward.

9 DAN STETSON: That's perfect. That
10 answered my question. I think yours as well,
11 Victor.

12 Martha.

13 MARTHA McNICHOLAS: There's another part
14 of Alice McNalley's question, which I think maybe
15 go back to Jerry.

16 "Your defense of nuclear waste is a joke
17 as you do not follow NRC regulations, instead you
18 apply for waivers and exemptions contributing to
19 possible overheating of nuclear waste," and I
20 think Jerry explained that. But maybe it's worth
21 while reiterating.

22 JERRY STEPHENSON: I'm not aware of any.
23 Doug, do you know what exemptions she's referring
24 to?

25 DOUG BAUDER: I'm not aware of any

1 specific exemptions regarding nuclear waste of
2 storage of fuel at all. There were some
3 extensions that were utilized in accordance
4 with -- I like hearing myself but not enough to
5 hear myself twice -- there are exemptions we use
6 in accordance with the licensing process that the
7 NRC has laid out for decommission plants that are
8 utilized to reduce the emergency plan, for
9 example. Because that's the mechanism we need to
10 use under the law, but I'm not familiar with
11 exemptions that we would -- we use at all for
12 defense-in-depth around the fuel. We haven't done
13 that. We followed all the required processes.

14 JERRY STEPHENSON: We are extremely
15 rigorous in our interpretation and execution of
16 all the regulatory requirements. That's one of
17 our basic tenets as operators of this facility.

18 MARTHA McNICHOLAS: There are times when
19 people don't understand you're not generating
20 electricity any longer, and you don't have nuclear
21 fission going on, so some of the safety guidelines
22 or emergency preparedness things change when
23 there's not actual power being generated. I think
24 that clarifies it.

25 JERRY STEPHENSON: That's a good point

1 Martha. But that's nothing that we've applied
2 for. The rules have changed, because they're
3 different set of rules governing an ISFSI than
4 governing, operating, generating a nuclear power
5 plant.

6 MARTHA McNICHOLAS: Exactly, thank you.

7 DAN STETSON: Thank you, both.

8 Kalene Walker she had a question in
9 particular that goes -- talks about our radiation
10 monitoring system here and just to refresh
11 everyone's memory, that goes all the way back,
12 David, correct me, to Gene Stone, and he was a
13 member of our CEP and he brought that up, and that
14 became a very important item for the CEP in terms
15 of ongoing radiation monitoring, because that
16 really came out of I think some of our meetings.

17 And, Doug, would you like to address --
18 her question particular is "what are the radiation
19 monitors, the type and model?"

20 DOUG BAUDER: Yeah, so there's some
21 history here. If you recall a couple years ago we
22 talked about measuring radiation levels at the
23 upper vents on the horizontal storage system. And
24 I took an action in one of the meetings here to
25 send a team out. We built scaffold. We get up,

1 and we actually measured the vents, upper vents on
2 the horizontal system and verified the radiation
3 levels were very low and reported back to the
4 panel. The kind of detectors we use is a little
5 technical. They're call R02A, R02 alpha we call
6 them. It's a very sensitive instrument. We did
7 that to satisfy that action to verify that there
8 was no radiation levels of any significance at the
9 upper vents on the horizontal system.

10 But more broadly, the radiation levels on
11 the ISFSI are so low that we take tours on the
12 ISFSI pad, dry fuel storage on both systems, the
13 horizontal storage and the Holtec system, and
14 members of the public do not even need to wear
15 dosimetry.

16 CHAIRMAN DAVID VICTOR: She specifically
17 asked for the make and model, I assume of the
18 handhelds and the fixed devices. Can we just
19 share that information with her by e-mail, and
20 then just include the e-mail and CEP circular so
21 it all gets posted?

22 DOUG BAUDER: Yeah, I'm sure the team can
23 put that together. I'm not a detector expert but.

24 JERRY STEPHENSON: We can do that.

25 DOUG BAUDER: Sandy is, and she was here

1 at the booth a little while ago. We can do that.

2 So the radiation levels are very low in
3 the dry fuel storage system. I want to also point
4 out that we took measures to continuously measure
5 the radiation levels, and they're sent to
6 California Department of Public Health, and
7 they're sent to the state parks, and I believe
8 they're also sent to the City of San Juan
9 Capistrano as part of an agreement to share the
10 data. That's out there, and it's published
11 monthly.

12 I kind of want to say we've been through
13 the radiation discussions many times, maybe at
14 some point we'll do a refresher on that. What was
15 said here in terms of other challenges as to how
16 we measure is all accurate as well.

17 DAN STETSON: Thank you, Doug.

18 Martha, any other questions you see
19 there?

20 MARTHA McNICHOLAS: One of the other
21 things that Kalene mentioned was -- it was a
22 statement, it wasn't a question. She said "every
23 single cask there is scratched and gouged." She
24 had some issues with the misleading how we measure
25 scratches and gouges or how we describe them or

1 define. So I kind of took offense at that every
2 single canister is scratched and gouged. Can I
3 get a little bit of defense on that?

4 JERRY STEPHENSON: I'll go ahead.

5 So we spent months evaluating the
6 scratches, rub marks, whatever you want to call
7 them on the canisters. We worked with the NRC, we
8 worked with third-party experts, we did the
9 statistical analysis that was then reviewed by LPI
10 and our experts did it, and the statistical
11 analysis were to predict what deeper scratches
12 could exist elsewhere. The deepest scratch,
13 Randall, 26 thousandths.

14 RANDALL GRANAAS: That was the deepest
15 measured.

16 JERRY STEPHENSON: 26 thousandths. The
17 canister wall is 625 thousandths thick. We agreed
18 with LPI that we would not tolerate a scratch
19 deeper than 62 and a half thousands. We are less
20 than half of what LPI conservatively asked us to
21 use as our maximum depth scratch.

22 These, if you look at a bridge that you
23 drive your car across every day or a lot of other
24 important safety pieces of structural steel in the
25 country, these scratches are trivial compared to

1 what you might find elsewhere.

2 In the nuclear industry we don't take
3 anything for granted. We looked at them very,
4 very carefully. We evaluate for months we got the
5 NRC's approval that our analysis was conservative,
6 and we feel very comfortable that we do not have
7 any condition out there that's at all reducing our
8 factor of safety.

9 CHAIRMAN DAVID VICTOR: Let me just add.
10 I was surprised by Nina Babiarez comment that I had
11 the audacity to say that the canisters weren't
12 damaged. I didn't say that. Seems to me the
13 issue is when you lower a canister of this weight
14 into a facility, like this sarcophagus out here,
15 it's going to hit the walls and be scratched.
16 It's an empirical question, it's a technical
17 question. Is 26 thousandths safe or not safe?
18 Let's focus on safety.

19 That's the discussion I think we're
20 having. It's not about some linguistic game about
21 whether the right word is scratched or gouged or
22 damaged or not damaged. Let's focus on the
23 numbers in the analysis.

24 Dan, are there any other questions?

25 DAN STETSON: I think Victor had a

1 question.

2 VICTOR CABRAL: No, no.

3 DAN STETSON: Martha, did you see
4 anything else that needed to be addressed?

5 MARTHA McNICHOLAS: I think not. I think
6 we caught everything. Everything that was a
7 question. There were lots of comments, but I
8 think we covered them.

9 CHAIRMAN DAVID VICTOR: I want to say one
10 more thing which is the comment -- Ted, did you
11 want to say something?

12 TED QUINN: I want to comment on one I
13 think came from Kalene Walker. It has to do with
14 defense-in-depth, I think the comment was about
15 the not following the process of defense-in-depth.
16 So I need to tell you in addition to my 46 years
17 in nuclear energy, I was a lecturer at MIT
18 (Massachusetts Institute of Technology) for
19 15 years, and on those 15 years the number one
20 subject was defense-in-depth. I can tell you
21 factually that the Edison process follows most the
22 domestic and international at process for
23 defense-in-depth. They're following that.

24 I disagree with the comment.

25 CHAIRMAN DAVID VICTOR: Thank you, I was

1 going to say the same thing with not the depth of
2 experience you have. Thank you, Ted.

3 In fact, this is exactly what they've
4 outlined, which is you design things to be safe,
5 and then you also design systems for inspection
6 and monitoring so that you can know how the system
7 performing, and you design things to repair if you
8 find any damage, and the whole system works
9 together, and you're constantly evaluating whether
10 you've got the right solutions. That is, by
11 definition, defense-in-depth.

12 I want to see if there are any other
13 members of the CEP who want to raise any questions
14 or see questions that have been asked by the
15 public we have not properly put to Edison? I'm
16 not seeing any. I'm also mindful.

17 One sign that it's dark outside is the
18 seagulls stopped making all the noise. I think
19 that's the sign as the night goes on. I want to
20 go next slide to Doug Bauder who is going to say a
21 few things closing comments from the SCE
22 perspective and then come Dan and me.

23 DOUG BAUDER: Sure. Thank you, David.

24 I really once again appreciate everybody
25 who was able to come out here today. Our public

1 tours will continue, so as I said earlier, please
2 sign up to, tell your friends, coworkers if
3 they're interested in what's happening here, to go
4 do that, and we will facilitate that.

5 We are always open to challenge. So
6 nothing that Jerry and Randall like more than an
7 engineering challenge. This was part of that,
8 this meeting because we do this once a year, but
9 the challenge is much appreciated.

10 Speaking of challenge, I want to say that
11 I've been in the job now about four years, and
12 coming into the job one of the first things I got
13 challenged by is this panel, particularly David,
14 Dan and others, and I had to do things to respond
15 to that challenge. This panel is not just a
16 conduit, it's also a way to push us to higher
17 levels of excellence in our work and being
18 accountable to the panel, we're also accountable
19 to the public.

20 So thank you, David, for that. And that
21 concludes my comments.

22 CHAIRMAN DAVID VICTOR: Thank you very
23 much.

24 Dan and I now have the enviable task of
25 summarizing key takeaways. Dan, do you want to do

1 that?

2 DAN STETSON: I pick you. Here you go,
3 David.

4 CHAIRMAN DAVID VICTOR: My last
5 opportunity.

6 DAN STETSON: I'll do it the next
7 meeting.

8 CHAIRMAN DAVID VICTOR: Thank you for
9 that. Pay it forward as it were.

10 Well, today we had an update on where
11 things are with the dismantlement on the site,
12 that seems to be on schedule and in good shape,
13 and safety and the site continues to be high, and
14 I think that's very important. We also had a tour
15 of the site, which I thought was extraordinary. I
16 want to, again, thank the Edison and
17 Decommissioning Solutions folks for making that
18 tour feasible. These things are hard to organize.

19 The central part of today's meeting was
20 around defense-in-depth. We didn't talk about
21 every aspect of defense-in-depth, that's not
22 possible, at least not with everybody being awake
23 by the end of the meeting. We did get an update
24 on where things are with inspections, with the
25 readiness of the fuel and with the continued

1 advance on repair technology should those ever be
2 needed.

3 I want to emphasize one part of this in
4 particular which is the last of the SONGS fuel
5 canisters will be ready for shipment by 2030, most
6 of them are already. Every single canister is now
7 in a certified transportation ready system, and so
8 we're ready to go as soon as we can change federal
9 law. That remains an important part of what the
10 panel must do going forward.

11 Let me just mention, spent fuel, the
12 coalition Spent Fuel Coalition is going to hold
13 its next webinar on the 15th of September,
14 11:00 a.m. to noon with leading experts who are
15 talking about the changing political situation
16 with the U.S. Spent Nuclear Fuel program. This
17 was the last meeting that I'm sharing, and it has
18 been an honor.

19 I'm going to say a couple words about
20 that in a moment. First, go to you, Dan, and see
21 if there are other key takeaways that I've missed.

22 DAN STETSON: David, only that I want to
23 thank you for your nine years of leadership during
24 this time and also your friendship, and thank you
25 on every possible level, and I have one quick

1 question for you, just promise me that you will
2 not change your cell number so that I can text you
3 in the middle of meetings for some help.

4 CHAIRMAN DAVID VICTOR: Okay. That is a
5 promise to be honored.

6 Let me go to the next slide which is --
7 Martha.

8 MARTHA McNICHOLAS: I wanted to say thank
9 you too, David. I'm sorry so my last meeting with
10 you as chairman is not in person. I was one of
11 the ones voted to keep having things in person,
12 but I'm glad that at least I could attend
13 virtually. Thank you, again.

14 CHAIRMAN DAVID VICTOR: Thank you very
15 much. I'm going to say just a couple words about
16 what I've learned in this experience in a moment,
17 but I want to show one more slide. These are
18 the -- I guess it's going to be two more, it's
19 inflationary times still, two more slides.

20 These are the meetings for the CEP this
21 year, August 17th, third quarter meeting, 4th
22 quarter meeting going to have an update on
23 transportation issues from the Department of
24 Energy. We may or may not have an update on this
25 indicative study that the DOE been involved with

1 on how to move the spent fuel out of here. There
2 are a lot of issues around transportation that are
3 now advancing. We have an invitation out to the
4 Department of Energy to speak at that.

5 Next year -- there will be a consultation
6 just the CEP members on December 7th.

7 Next slide. Here's a list of plausible
8 topics indicative topics for 2024, something on
9 environmental stewardship, something around the
10 federal consolidated interim storage efforts in
11 the second quarter, the defense-in-depth in third
12 quarter, and a much more detailed update on the
13 dismantlement of the site on the fourth quarter.

14 This is indicative, if people have other
15 ideas, they hate these ideas, let us know and we
16 can have some discussion about this. That will be
17 in particular something discussed by the CEP when
18 it gets together on December 7th.

19 I want to close by saying five things
20 about what I've learned over the last nine years,
21 nine years, doesn't feel like a day over 27 years.
22 Ted Craver was the CEO of Edison International at
23 the time called up and asked me if I wouldn't mind
24 being a volunteer to chair this panel to help be a
25 conduit, a two-way conduit during the

1 decommissioning process for this plant, and I said
2 sure, how hard can this be?

3 You know, people like the plant, they
4 don't like the plant, whatever the plant is
5 closed, there must not be anything left to
6 disagree about. I will say that I was dead wrong,
7 and I'm thrilled that I was dead wrong about that,
8 because I've learned an enormous amount about the
9 process, learned a lot about the industry what
10 it's doing, and I've learned a lot about politics
11 in this process. I've had just an enormous amount
12 of respect I've learned about with regard to local
13 politics. As fractured as a national politics
14 are, it's so impressive to see how local politics
15 works and how so many members of the CEP are
16 elected officials, and you on the daily basis deal
17 with the kinds of tradeoffs that we're grappling
18 with here, and I really, really appreciate that.

19 Thank you, Ted Craver, for lying to me
20 about the actual nature of what you're asking me
21 to do.

22 Second, not obvious that the CEP would
23 work. It wasn't even obvious really what we were
24 supposed to do. We had a partial model from Maine
25 and a few other places, but they were not places

1 where the close down of the plant was a
2 contentious process. They're out in the middle of
3 almost nowhere, not an anti-Maine comment, but
4 it's just not a lot of people there. This is very
5 different. And so it was not obvious this was
6 going to work. It worked I think because we all
7 worked really hard to keep civility, the members
8 of the public worked hard to ask questions, even
9 when they disagreed, to ask questions and keep
10 information flowing, and Edison responded by
11 answering those questions, and we did a lot of
12 things along the way that added real value.

13 That's the third comment I want to make,
14 which is this panel and the responses from the
15 public and from Edison have added real value
16 around the monitoring system at the plant, around
17 support for first responders, around the peening
18 that we talked about on some detail earlier today,
19 around ongoing questions with regard to emergency
20 management including terrorist threats. I can't
21 believe we successfully had a nonclassified
22 meeting about terrorist threats to the ISFSI. I
23 can't believe we pulled that off. A lot of people
24 contributed to that. It handed real value.
25 That's the third thing I wanted to say.

1 Fourth thing I want to say is this has
2 become a partial model for the rest of the
3 country. Folks are watching. I think we're
4 learning, and they're learning and this is
5 important because a lot of plants have closed. My
6 own view is that too many plants have closed. I
7 work on climate change, nuclear zero carbon.
8 Where plants have closed they need to learn how to
9 do it responsibly. This has been one model and
10 very difficult circumstances at times for doing
11 that.

12 The fifth and last thing I'll say is that
13 our work is not done. We have to continue
14 focussing on defense-in-depth, we have to continue
15 with meetings like the ones listed up here, we
16 have to continue working and organizing to change
17 federal law working with our elected officials and
18 our partners in other places around the country.

19 With that, I would like to thank all of
20 you for enormous support and contributions to the
21 process. I'm honored to have played this role. I
22 want to urge everybody to be safe as you go home.
23 This is not the usual go home where you walk out
24 of the tent or the building and get in your car.
25 I think folks are going to tell you what to do to

1 leave, and we'll be shuttled back to where you
2 parked your cars. Please do be safe as you drive
3 home.

4 With that, I will both adjourn my last
5 meeting and hand the gavel, which doesn't actually
6 exist, the virtual gavel to Dan Stetson.

7 (WHEREUPON THE MEETING WAS ADJOURNED AT
8 8:51 P.M.)

9 (CERTIFICATE OF COURT OFFICER ATTACHED ON
10 FOLLOWING PAGE HEREOF.)

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CERTIFICATE
OF
CERTIFIED SHORTHAND REPORTER

I, the undersigned, Certified Shorthand Reporter of the State of California do hereby certify:

That the foregoing proceedings were taken remotely before me at the time and place therein set forth; that a verbatim record of the proceedings was made by me using machine shorthand which was thereafter transcribed under my direction; further, that the foregoing is an accurate transcription thereof.

That if the foregoing proceedings were reported stenographically remote from the witness and parties, the transcript of the proceedings reflects the record that I could hear and understand to the best of my ability.

IN WITNESS WHEREOF, I have this date subscribed my name: October 10, 2023.



Certificate Number 12983

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