CEP REGULAR MEETING

SONGS Decommissioning Update and Dry Cask Storage Defense-In-Depth

Via Skype, Thursday, August 20, 2020

TRANSCRIPT OF MEETING

August 20, 2020

Reported by:

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SAN ONOFRE DECOMMISSIONING

COMMUNITY ENGAGEMENT PANEL MEETING

STATE OF CALIFORNIA, COUNTY OF ORANGE

Transcript of video-recorded meeting, taken via Skype commencing at 5:3o p.m., Thursday, August 20, 2020.

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CEP SECRETARY - MARTHA McNICHOLAS
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TED QUINN
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KATHY WARD
DOUG BAUDER
RANDALL GRANAAS
ROSS QUAM
KELLI GALLION-SHOLLER
MANUEL CAMARGO

PUBLIC COMMENT PERIOD

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Via Skype, Thursday, August 20, 2020

CHAIRMAN DAVID VICTOR: Thank you very much. Thanks to all of you. It's the end of August. For many of you it's the week before the kids go back to school, plus we're competing with Joe Biden and the Democratic National Convention, so I'm grateful for those of you who joined us tonight.

This is the quarterly meeting, third quarterly meeting of the community engagement panel. I'm David Victor and the chairman of the panel. This meeting is being recorded, and as is our custom, we put copies of the recordings up on songscommunity.com so there's a full record of all of or meetings, questions and discussions and so on and today is August 20, 2020.

Normally when we meet in person we have a moment of safety telling you about the exits. I can't tell you anything about the exits where you're sitting, probably in your houses, but I will say to continue to follow scientist's guidance with regard to COVID-19 and in particular the role of masks and social distancing. We in

the state have a lot more to do on that front, the country as well.

I want to thank all the CEP members and the public for joining us tonight. Before we move on, I want to make a brief comment about Gene Stone, a former CEP member, who I heard over the last day or two was not well and may be joining us at home by video. Gene has played an enormously helpful role to this panel and to our communities as we deal with the closure of the San Onofre plant, among many other things, he was really the person at the center of the very successful effort to get a good community facing, realtime monitoring program for the radiological conditions that are around the boundary of the site. I believe there's only one other plant -- one other decommissioning plant in the United States that has that kind of program, and it's really part of one the many things that is now emerging here in San Onofre on how to do responsible decommissioning.

We had a text exchange today. Gene said a lot of interesting things in that. I just want to draw out three points that he meat. One is that it's so important for all of the members of

the community to work together on topics of paramount central community importance, and I think particularly the removal of spent waste has now emerged as item 1 on that. Second thing he said is it's really important to have active efforts to continue to hold the community together because we're not always agreeing, and, we're, frankly, we're not always together rowing in the same direction and it seems like a very important point.

And the third thing he said was, David, whatever you say about me tonight, just make it short. So there you go. I want to thank you, Gene, for being such a great citizen, for good humor and a friend, so thank you. Thank you very much.

This meeting is -- we're holding virtually and it's complicated, and I appreciate everyone's perseverance with the technology. We want to maintain the engagement process even during difficult times. So we posted the meeting materials well in advance a week ago on songscommunity.com. The instructions are on the website. There's a variety of different click-throughs on the website that gets you

directly to the page and pages with information about how you can dial in, how you can ask a question.

Manuel, I want to thank you. You're going to be advancing the slides remotely during tonight's conversation. I want to remind everybody that the role of the community engagement panel is a two-way conduit between Edison and the operator, and its contractors of the site, and the various communities that are affected by the decommissioning process and the idea as it has always been that information flows both ways and we help all of us do a better job.

We put up on the screen the agenda for tonight's meeting. And is it up on the screen?

MR. CAMARGO: Yes, David, do you see it now? There is a slight delay with Skype. Do you see the agenda?

CHAIRMAN DAVID VICTOR: Okay. If you tell me the agenda is up there, then I'm going to continue on and operate as if the agenda is up there. I can see it on the slides here, but I can't see it on my screen, but I may be pushing the wrong button. Let me continue on here.

To say we got a lot of topics to cover

during the meeting tonight. We're going to be getting a big picture update. We cut that short last time on where we are with the site including relevant recent milestones. We're going to have an update on defense-in-depth term that actually we Gene Stone helped us sharpen. Defense-in-depth around the canister system has been a paramount of attention during the coastal decommissioning process, and so we're going to give an update on that. And every quarter, every year, at least one of our quarterly meetings is going to have a big focus on those kinds of issues.

We're going to have an update on the dismantlement milestones and liquid batch releases that have been in the news a lot. We're going to have some information and update on the artificial reef, the world's largest artificial kelp reef, and then we're going to have preliminary discussion of some issues around the strategic plan regarding moving the spent fuel off site from San Onofre. That's going to be followed by the normal public comment period.

So next slide, please.

So we're going to -- Doug Bauder and I are going to lead some additional opening

comments, and then pause for a moment after that and see if there are any comments or updates that other members of the CEP would like to make so going to the next slide, please.

I want to thank Gerry Kern. He has been serving on the CEP representing Oceanside since the formation of the CEP in 2014. He was also secretary to the CEP, enormous contributions from Gerry. I want to thank him tremendously for his service.

And also welcome Rob Howard, who is the new Oceanside representative for the CEP. Rob was an operator at SONGS up until early this month actually. He's president of the utility workers Union of America Local 246 on Representative Levin's task force. We'll talk about Representative Levin's task force in just a moment, and he's running for mayor for Oceanside as well. So enormous public service and knowledge about the plant.

I want to also congratulate Martha McNicholas who has agreed to take on the role of CEP secretary, so thank you very much, Martha, for agreeing to do that and maybe when we're done with this initial comments here, I'll pause for a

moment and see if there's anything that Rob or Martha would like to say.

I'd also like to mention that Dan Stetson and Martha are going to reviewing comments and facilitating discussion during the public comment period, so thank you very much for doing that as you always do.

I want to pause for a moment here and see you can take off your microphone and I'll see if you have taken off either Rob or Martha, if there's anything you would like to say right now.

ROB HOWARD: This is Rob, I just want to say thank you for the opportunity, but also with the comments you made for Mr. Stone are incredibly critical and I got to experience that when you have a difficult topics, such as this one, it is really important that people work together. We don't have to agree on a hundred percent of the things, but if we stay focused on what our goals are, but that's how we reach success.

Again, looking forward to working with the committee.

CHAIRMAN DAVID VICTOR: Thank you very much, Rob.

Let me give the floor now to Martha

McNicholas.

MARTHA MCNICHOLAS: Thank you, David. I am glad to be part of this organization. I've been on the CEP for several years. I just realized now that I have to listen more carefully than I usually do and actually take notes and remember names, so I'm apologizing in advance and even as an engineer I have been technically challenged in some of these remote things, so again, I apologize, I'm glad to participate and glad to contribute, thank you.

CHAIRMAN DAVID VICTOR: Excellent, thank you very much.

I teach via Zoom and I find myself constantly bewildered by all the different platforms. Very happy for the technology to work most of the time. Thank you both Rob and Martha.

So I want to go now to the mention that up on the screen here for the public comments and facilitated dialog period that if you would like to make a comment or ask a question or both, you can go to that link up on the site there. It's also if you're on songscommunity.com and go to the meeting page, you'll find the link there as well. The link is now on lots of different places on the

materials circulating in advance of this meeting. Go there, put in your information, and you'll be put on the list realtime, and then I'll call on you later in the meeting.

So I want to go now to Doug Bauder for some opening comments from Doug.

Doug, the floor is yours.

DOUG BAUDER: Thank you, David. Good evening and thanks for the opportunity.

Just playing off of, you know, what you talked about earlier regarding social distancing and use of masks and the like, we're very much focused on safety here at the station and much of that does include a response to COVID-19, to the pandemic, and I also want to mention that it would be great I know it will happen sometime in the future, I don't know when that we will be able to meet in person again. I think there's many advantages to that so we'll do our best here tonight.

I have some presenters from San Onofre that are very eager to share context tonight, so thanks for the ability to do that.

Just talking briefly about the COVID-19 update for San Onofre, we have had actually only

one positive case at San Onofre. It's a contract worker. We announced that to several media outlets back on June 30th. I will say that we've done follow-up activities for suspected cases. They are actually called "presumed positive" when somebody is symptomatic. We've done additional quarantining for workers and some other work to ensure there has been no spread at San Onofre, and I can say that with emphasis, there has been no -- (due to technical difficulties, there is no transcription for 1 minute and 48 seconds.)

CHAIRMAN DAVID VICTOR: -- I want to mention that on July 23rd the CEP had a CEP only meeting by Skype to have some discussions about the agenda and some prearranged discussions about topics that should be put on the agenda and discussed with the larger community potential agenda topics and in particular a lot of attention around what is fundamentally a political problem which is how we get the spent fuel moved off site and so the CEP would like to put more -- (due to technical difficulties, there is no transcription for 3 minutes and 5 seconds) -- information about what the provisions are regarding protection of the ISFSI and the site has become an ISFSI-only

site, and so that letter is enormously response to that, so thank you very much.

Second item in terms of general updates is the community advisory board. You may remember, some of you participated, the Nuclear Regulatory Commission did a road show around the country, asked lots of community advisory boards, which all have different names and different value principals, asked them what they were doing, what best practices are, they wrote a big report. I have no confidence the report is going to change anything, but it's a lot of information about what's going on in the different communities and the different panels, so that is on songscommunity.com, and it's also on the NRC's website.

We contributed a lot to that process so that report is now out. I want to pause for a moment and ask Dan if he wanted to say anything with regard to Mike Levin's task force which reported out to earlier this summer.

Dan, the floor is yours.

VICE CHAIRMAN STETSON: Good evening, David. Thank you.

Yes, Congressman Levin recently released

the findings of his nuclear task force. I was on the task force along with three other community members. It could be expected that the first group of participants there were areas of agreement and also many areas of significant disagreement.

Ultimately the task force made 30 policy recommendations. One particular takeaway that I think is especially relevant to this group is SONGS is no longer operational for a whole host of reasons. Congressman Levin did commit to aggressively pursue legislation that would direct the Department of Energy to prioritize accepting the recommendations of SONGS.

The full report is available on Congressman Levin's website. Judge Kramer is also on the task force, but I don't see him on the list of participants, David, so we may need to have him check in later.

CHAIRMAN DAVID VICTOR: He's not able to join us tonight but let me pause for a moment since we're directly on this topic and see if any of the other CEP members who were on the task force would like to comment on the task force and the next steps.

Marni Magda?

MS. MAGDA: Sorry, I wasn't -- I didn't mean to respond.

CHAIRMAN DAVID VICTOR: Okay. I saw your microphone off or on, actually, I wanted to make sure if you want to speak so anyone else want to comment about the task force?

Okay. I'm not seeing any other microphones so we'll move on. I want to say one thing I was on the task force, a lot of respect for what Congressman Levin is doing in Washington. His office and I, he and I talk periodically. I was very encouraged during the rollout of the task force and in his webinar with Surfrider, among other places, that he emphasized in particular a topic that gets a little less attention in the task force report itself, should the importance of a strategy for moving a spent fuel off site in a responsible way and in particular the importance of interim storage. I think that's important that he's been unwavering in his support, along with Diane Feinstein and Scott Peters and others. He's been unwavering in support for that in Washington, and that's going to be very important for us when we come back to this topic at our quarterly

meeting later this year.

I wanted to go through a couple slides. Go to slide 9 please, Manuel.

I want to just show you I think four slides of some pictures. I was in the neighborhood of Clive, Utah. Utah is a big state and the neighborhood is very large. Within four hours I was in the neighborhood and dropped in for a visit at the end of last month and took a bunch of photographs, and I wanted to just show you what I saw there, which is important for us, because almost all of the waste, not the spent fuel, almost all of the waste, certainly almost all of it by volume and weight from the site, San Onofre site will be going mainly by rail car --

MR. CAMARGO: David, sorry, technical issue. Do you see the slide from Energy Solutions, is that up now?

CHAIRMAN DAVID VICTOR: I'm working on the slide deck. My computer is not showing any of the slides. Is it up?

MR. CAMARGO: It looks like it is on my screen.

MR. GURAGAIN: Manuel, this is Sanjay, you need to start sharing, we don't see anything.

MR. CAMARGO: Okay.

CHAIRMAN DAVID VICTOR: So is it up now?

MR. CAMARGO: Not yet. How about now?

MR. BAUDER: It looks like it's loading now, Manuel, we'll see.

CHAIRMAN DAVID VICTOR: I think we see your desktop now.

MR. CAMARGO: That's not what I see on my screen. I did share. Should I start over?

CHAIRMAN DAVID VICTOR: I would stop the sharing and share the window.

MR. CAMARGO: Okay.

CHAIRMAN DAVID VICTOR: Folks, please bear with us. Sorry about that.

MARTHA McNICHOLAS: Maybe I can add a little bit while we're waiting?

CHAIRMAN DAVID VICTOR: Okay.

MR. CAMARGO: Is that okay now?

Sorry, Martha. Go ahead.

MS. MCNICHOLAS: Last night at the Capistrano Unified School Board Meeting we did approve, without comment and without rejection, any negative comments, the subordinate agreement and transfer agreement in support of radiological emergency planning and response activities for

SONGS. So there are some people in our school board that have been in the past very negative but it was very positive and cooperative, and also I was -- to school district received some funding so I just wanted to add that.

CHAIRMAN DAVID VICTOR: Thank you very much for that, Martha.

I want to suggest if there are other CEP members who have updates that are of general interest to the community, we should do that right now. I've got four slides that are related to Clive, Utah that will show up on the screen at some point maybe, then I'll be done with the updates, and then we're going to go in to the next segment of the meeting.

If you want the floor, members of the CEP, turn your microphone on, I'll see that it's on and see if there are any comments that people would like to make.

Okay. I don't see any microphones that are on.

Manuel, do we have a --

MR. CAMARGO: Lorraine is going to try to share, David. My system is fighting with me.

CHAIRMAN DAVID VICTOR: Okay. Sanjay,

can we tell the system to stop fighting with Manuel. Great. Thank you very much.

If we can move onto slide 9, please, Lorraine. That's slide 49. That's 50.

MR. CAMARGO: Lorraine, if you can enter the number 9 and enter, that will take you to slide 9.

CHAIRMAN DAVID VICTOR: Okay. Great. Thank you very much.

Manuel, are we seeing the slide now? I can see them up on my screen.

MR. CAMARGO: I'm seeing it on my screen, David.

CHAIRMAN DAVID VICTOR: Okay.

MR. CAMARGO: The rail car?

CHAIRMAN DAVID VICTOR: One of those moments where I thought my brain was going crazy and turns out that I just couldn't see. None of us could see it.

I want to show you four slides. I was in the neighborhood of Clive, Utah. It turns out it was very hot in Clive, Utah in the middle of the summer, it's 108 degrees at 2:45 in the afternoon the day that I was visiting. Show you four images. First is the rail cars. 99 percent of

the waste on the San Onofre site will be moving by rail. It will be moving by two kinds of rail cars. The ones shown here are normal side cars, which are high side cars and they all have a lid. You see the white lids on top of these rail cars, and they're covered for transportation.

High side cars are useful for high volume waste, but they quickly become overloaded so you can only use half the size of the car. So most of the waste, which will be rubblized concrete and steel and things like that will be only in lower side cars that have lids on top of them and they go into a building, and they're dumped outside down right in the building.

So the box stays on the car, flips over, dumps the material out, flips back and they wash the car and right there onsite, and then it goes back to usually in this case back to San Onofre. One of the things that's striking when you arrive is you see rail track everywhere. It's a gigantic site, and there are ten parallel rail sidings there, an very large part of the site is taken over by rail.

Next slide, slide 10, please. A lot of the rail shows up big and needs to be small, and

the way big is turned into a small is with a shredder. This has got to be an OSHA nightmare. So this takes very large pieces of steel and they run it only at night, partly because they use so much electricity has its own substation and power points are lower in Utah at night than they are during the day, and also because it's really dangerous because stuff comes flying out of the shredder periodically.

Nobody is allowed to be near the shredder during its operations. This takes large pieces of steel, brings them down to four inches or less, and then that is used in the site, put around larger material so you have a compact ultimately pile or layers of debris that are then in tuned inside clay-lined pits and then covered.

And I want to show you the last two images are of those pits. Slide 11, please.

So the site was built initially as a place to store the waste from a super fund site near Clive, Utah. That's not where the San Onofre material is being stored. That's a totally different place, but the site was officially opened by a company for that purpose, was very effective for that purpose. They're now in the

business of storing low level radiological waste.

The standard strategy is you excavate out pit, and then you put large components that need to be stored in place first, and then you fill in around them. To give you a sense of scale. A lot of you have seen pictures of the reactor pressure vessel from unit 1 that left San Onofre I think in the beginning of July, and then went on a long road trip to Clive, Utah, basically the opposite of what I did, and it arrived a week or so before, ten days before I was there and that was a gigantic component. That's shown in this picture here circled in the red. It gives you some sense of the scale.

Around that they'll fill in debris and so on and put layers of clay on top, and then ultimately fill it up to a mound. And you can see the mound behind it, the white behind it is the top of an adjacent mound that is then sealed.

All of these have a French drain system, in effect, underneath them with tubes that collect any water that might accumulate and allow you to sample that. Pictures of those tubes are shown on the left-hand image here. Lots of SONGS tremendous attention to ground water control.

Aquifer in the area is the highly saline Aquifer that's relatively deep. Some of the water from the Aquifer is pumped out and it's used for dust control and fresh water is trucked, huge number of trucks every day. Last slide, slide 12, please.

And this is a schematic section view of what ultimately one of these mounds looks like. I've got some other pictures. If anyone wants to see more, I'm happy to share those with you.

You show the excavated site. These black tubes on the left and the right. Those are the French drain systems, the sumps. And then in the middle are layers of waste compacted and disposed, and then on top is an engineered cover, which is a series of filters, soil, clay, and then rip-rap on top of that.

It's a pretty impressive site. I thought it was important to go visit at some point, get a sense of where the ultimate location is going to be for these materials and we welcome any comments or conversations about that.

Before we go on to the next segment of the meeting, I want to pause and see if any members of the CEP have any comments or questions before I give the floor back to Doug Bauder.

Okay. So next on our agenda is we're going to have an update on the big picture at the site, updates on the calendar so schedule.

So, Doug Bauder, the floor is yours.

DOUG BAUDER: Thank you, David, I appreciate it.

Manuel, if you would just advance the slide to 14, that would be great.

Okay. So this slide describes our decommissioning principles. We talked about this at many meetings: Safety, stewardship, and agreement. First I want to talk to about safety briefly. Our prime contractor here, SONGS Decommissioning Solutions not too long ago passed 1 million safe work hours at SONGS. We greatly appreciate that. We're continuing to focus on safety.

We want to make sure the deconstruction project generally the removal of above grade structures started earlier this year, conduct it in a safe manner.

And then we want to continue, and we're going to continue maintaining defense-in-depth as it relates to onsite storage or the nuclear fuel. You'll hear later in the meeting when Randall

discusses our demonstrator repair method that was actually used as part of our inspection and maintenance plan, which was approved by the Coastal Commission on the 16th of July.

And then third, we're taking action to get the fuel relocated off site. As David mentioned, the strategic plan you'll hear about some of the plan later tonight by Manuel. You'll hear more details on it at most likely the fourth quarter CEP meeting as we continue to develop the plan, and it's on schedule to be produced and released early next year. Next slide, please.

Thank you, Manuel.

Just to talk a little about some of the work and the big picture of things, I want to spend a little bit of time talking about our -- actually our ISFSI standalone organization. So we did have some significant milestones since the last meeting. We completed fuel transfer. All the fuel has been safely stored as of August the 7th, that is 73 Holtec canisters safely stored.

We did achieve our inspection and maintenance program approval, as I mentioned on July 16th, and we established a standalone ISFSI

organization. I'm sure there may be some questions about that, so just to discuss some details about it, it has a separate fencing and boundary system at the station. It's segregated from our dismantlement work. So that work during the dismantlement phase cannot disturb the systems in the dry fuel storage installation.

It has a separate staff. It includes staff to maintain the fuel in a safe condition, separate personal to run NRC required programs in that standalone organization, and a separate and dedicated security organization.

So the sole purpose of the ISFSI-only organization is safe storage of the nuclear fuel, and we intend to keep it that way throughout the decommissioning activities at the station. We are shifting our focus more towards decommissioning, and we'll talk a little bit more about those key activities as we move forward. One thing I do want to mention, and we'll talk about this some more is some of the key work taking place is focused on work inside the containment domes. The large structures, the most evident structures you see as you drive past the station of looking at the station from Route 5.

The next slide, please.

Okay. I want to mention our quarterly update. We do these -- committed to do these once a quarter. We released the last tri-fold in mid-July. We also post that information online at songscommunity.com. A link is here. If you reach out to NUCOM, we can provide that link to you directly if you ask about it.

We call it quarterly update for mid-July seen and unseen. The reason we say that is because you can see the station, there's some seen activities, and they're referring to the contain domes, the most visible structures at the station. And then unseen is the important work taking place inside those domes, and that will primarily be important decommissioning work over the next year or so.

If you think about the importance of this work, some of this is going to involve safe removal of some higher level radioactivity, radioactive components of the station, and we're highly focused on completing that work safely. Seen and unseen is a good theme because you will see some activities around the domes taking place. We're going to enlarge the openings to move the

equipment and components in and through the containment domes, and unseen is the important work inside.

And the update we provided we mentioned that the asbestos removal to make safe work conditions for our workers has been completed in the containment domes and continues to some other areas in the station. So we'll continue to quarterly updates throughout the decommissioning project.

I will once again encourage you to look at Songscommunity.com. We post in the Need to Know section important decommissioning work.

With that, I'll hand the floor over to Randall to talk about dry cask defense-in-depth.

CHAIRMAN DAVID VICTOR: Let me just pause for a moment, Doug, and see if there are any questions from the CEP about what you just said.

I don't see any but I want to ask one which is a question we actually had in advance about this standalone ISFSI organization. It's an organizationally separate, but it's run by Edison, it's your organization. It's not a new corporate form or a public institution or something like that, it's -- you run it, and it's overseen by the

NRC and follows the rules that are set for ISFSIs, right?

DOUG BAUDER: Right. I did see the question, David, and it's run by Edison; it's regulated by the NRC. It follows what other decommissioning stations have done and continue to do around the country, and actually when we're completed safely removing the above structures on the station, what you will see left if you take a topographical look at the station, will be the switch yard, the ISFSI only or the dry fuel storage installation, and basically an access road to get to those areas at the station, and I guess finally the sea walkway and the wall will be it.

We're very focused on keeping that organization separate and protected while we do the decommissioning work.

CHAIRMAN DAVID VICTOR: Okay. That question came from Alice McNally, for the record, from the community, and I think we should make sure we can reach out to her, and I think if she's asking questions about how local office holders, city representatives, and activists groups, and so on get involved in organization sounds like they get involved through the CEP, they get involved

through the NRC oversight process, the norm. This is as folks got involved with you during the broader decommissioning of the site. Thank you very much.

I think we're giving the floor now to Randall Granaas who is going to talk about the defense-in-depth, which is the idea that there are layers of defense, of monitoring and response all around ensuring th integrity of the spent fuel while that spent fuel remains at the site.

So, Randall, the floor is yours.

RANDALL GRANAAS: All right. Good evening, everyone. My name is Randall Granaas, fuel and ISFSI engineer.

Next slide, please.

That seems to be a photo of our Songs UMAX ISFSI.

Next slide, please.

Tonight I'll be discussing dry cask storage defense-in-depth, in particular maintenance, inspection, and remediation.

Next slide, please.

So as you've already heard, SONGS inspection and maintenance program or IMP, which was recently approved by the California Coastal

Commission. Implementation of the IMP during the initial 20-year licensing period exceeds NRC requirements based on a credible aging mechanisms. The NRC does not require canister inspections for the first 20 years after loading a canister.

The IMP is a comprehensive program to monitor Holtec canisters, ensuring the canisters remain ready for onsite or offsite transfer. And canister degradation, if it were to occur, is slow developing. The IMP ensures early detection.

The IMP includes the metallic overlay repair method, which is ready to deploy in the unlikely event it is needed.

Next slide, please.

So how did SCE qualify the metallic overlay process? First, we referenced military standard 3021 which qualifies the cold spray process for military applications. Cold spray being synonymous with metallic overlay. Military standard 3021 references ASTM standards for adhesion and porosity, and SCE's qualification for metallic overlay also includes a hardness requirement.

Metallic overlay has been used for several military applications, such as B-1

aircraft hydraulic lines, and Apache helicopter mast supports.

We demonstrated the process using a canister mock-up at the vendor facility and via in-situ simulator repair on our heated test canister.

Test coupons are used to validate the process as working before and after the repair. Test coupons simulate a piece of the canister. They're made of the same material as the canister and have the same curvature. Later in the presentation there's a photo of a test coupon. The simulated repair on the heated canister will be inspected along with the test canister and providing an excellent opportunity to observe long term performance of the repair.

Finally, an independent engineering consultant, LPI, review the metallic overlay process in concluding the process can effectively mitigate stress corrosion cracking on a dry storage canister.

Next slide, please.

The IMP includes inspection of the entire system, the concrete and the storage module. Every five years two canisters will be inspected.

Since eight canisters were inspected in 2019, the next inspection of canisters loaded with fuel will occur in 2024. The test canister will be inspected every two and a half years starting in 2022.

The heated test canister's leading indicator for corrosion as a storage module outlet air temperature is set below the coolest outlet air temperature for a module loaded with a fuel, and the test canister is stored in a module in the row closest to the ocean. And data from the ISFSI radiation monitoring system is sent to three offset agencies.

Next slide, please.

This photo shows the heated test canister before it was placed in a storage module. What looks like a cross in the photo are the canister's circumferential and longitudinal wells, and that's a focus area during inspection.

Next slide, please.

These photos show the inspection we're about to deploy inside a storage module, and the camera mounted on the robot can view the canister shell with the exception of the bottom one-inch of the base plate which is occluded by the pedestal

upon which the NPC rests. The three-inch thick base plate itself is not critical, but the base plate to shell weld is. We can't see the base plate to the shell weld. It's not occluded by the pedestal.

Next slide, please.

So SCE has lead the industry in developing metallic overlay as a canister mitigation and repair technology. The rest of the industry is active as well. EPRI has a three-year project initiated this year to evaluate five different repair methods as listed on this slide. The most suitable of these five methods will be balance selected for remote deployment using a robot and demonstrated at two different dry storage facilities.

The DOE is also looking at additive friction stir welding, and the challenge here is miniaturizing the technology such that it can be deployed on a robot within the tight confines of a storage module.

The industry currently rates cold spray or metallic overlay as the highest among perspective canister repair methods. That said, SCE will be monitoring these initiatives as well

as future initiatives. It's possible one of these methods could turn out to be a good alternative to metallic overlay, and we're not going to know until the research and development is complete.

ASME code case N-860 has been approved by the board of codes and standards and submitted for publication, and the IMP is largely modeled on this Code Case. And the task group, which SCE is a member, is moving onto adding a mitigation and repair sections of the Code Case. SCE does believe that the metallic overlay will be included in the Code Case as an ASME approved repair method.

Next slide, please.

Maintenance will be performed on the ISFSI structures as dictated by periodic inspections. The temperature and radiation monitoring systems will be periodically checked to ensure they're operating properly, and canister maintenance, if necessary, will be performed as dictated by the inspection results, and this could include application of metallic overlay.

Next slide, please.

The photo on the left shows the robot with the metallic overlay spray nozzle applying a

simulated repair to a test coupon at the vendor's facility, and the photo on the right shows the test coupon with the completed repair.

Next slide, please.

The video is the metallic overlay process if you can view that, Lorraine. I don't hear any sound myself. Let's see. Does anybody else hear sound?

CHAIRMAN DAVID VICTOR: Nope.

RANDALL GRANAAS: I know the video is playing but no sound. I guess we'll have to let it go because -- I can try to narrate. There it is August 2019, and there's the test coupon. And that would be the deployment at the site when we operated it and did the test repair on our test canister, and that's back at South Dakota. Looks like it's playing over again.

CHAIRMAN DAVID VICTOR: Okay. Why don't we stop the video. Courtesy of TikTok here.

RANDALL GRANAAS: Yeah, yeah, so basically you can see it doing the spraying process, it applies the spray, the robot moves and the arm moves, and that's how we get the spray, and this is all program to get the proper thickness. I think that's probably enough, unless

Lorraine thinks it's going to play better, I can move onto the next slide.

CHAIRMAN DAVID VICTOR: Why don't we move onto the next slide, and we can come back to this if there's time, but let's keep going.

RANDALL GRANAAS: All right. So the MPC and ISFSI system inspection results will be reported to the California Coastal Commission every five years. Radiation monitoring data is reported to state and federal officials and that will publish monthly, and all of this information will be available at songscommunity.com. That's all I have. Thank you for your time.

CHAIRMAN DAVID VICTOR: Thank you very much, Randall. I want to pause and see if there's some questions about this. This is an ongoing topic. I do think that two comments while people are writing their questions, one comment is I think it will be good to have an update as soon as you have the first inspection. This is much more aggressive inspection program than I think has been done anywhere else and I believe never done on canisters before the 20-year initial licensing period, so it would be good to know. I assume you're not going to find anything in that regard.

The other comment I make is the coolest canister, just for context of everyone, the chemical processes that run -- that lead to stress corrosion cracking, which is the biggest concern those processes run better at cold temperatures. The reason the test canisters are at the Oceanside at the site in the coolest location is the same reason that when the Nuclear Regulatory Commission goes and requires inspection of a canister for a re-licensing of ISFSI, they go to the coolest canister, because that's the canary in the coal mine, if you like, and that's why you're doing it with the coolest canisters.

I have a couple questions but before we go to that, I want to see if others. Looks like Martha McNicholas would like the floor.

So, Martha, the floor is yours.

MARTHA MCNICHOLAS: Yes, Randall a couple of things, what you mentioned on other potential repair research, EPRI and the DOE, those are really -- those are separate activities not being conducted by SCE, we're just kind of being aware of other things that are going on; is that true? Is that the way I understand it?

RANDALL GRANAAS: Well, not only are we

aware of it, but we co-chair one of the subcommittees in EPRI ON repair mitigation, so we're very involved in it, but we're not -- there's research made being, being implemented by other organizations such as EPRI or Department of Energy or universities, right. We're definitely part of the committee, and we're well aware of what they're working on.

MARTHA MCNICHOLAS: Okay. So we're intimately involved but we aren't actually doing that research. They're doing the research in what could be very valuable to us if we need it?

RANDALL GRANAAS: Correct. Defense-in-depth, we may have another opportunity, another method as well, yes.

MARTHA McNICHOLAS: Right. The other thing and I did ask some questions ahead of time on the metallic overlay, the terminology "coupon" really got to me. I don't think of that as -- I'm thinking what, what are you talking about, coupon, but as basically as test sample.

RANDALL GRANAAS: It is.

MARTHA McNICHOLAS: And so this is actually spraying a metallic -- maybe you can explain a little bit more to me. I just got

through painting some kitchen cabinets with a sprayer, and that's kind of what I'm thinking of. I don't think that's anything like spraying kitchen cabinets.

RANDALL GRANAAS: Well, it's not and let me read the description that's actually out of a DOE report from last year. And cold spray is a solid phase deposition process where particles are accelerated to supersonic velocities and impact the substrate -- a substrate would be the canister of course -- and the impact energy is sufficient to plastically deform the material at the interface and produce mechanical interlock and metallurgic bond and the heating is minimal.

So that material is more than spray paint. You can't get it off if you want -- that's what we do the adhesion test for. When we do the adhesion test this really high tech glue they use which fails at 10,000 PSI, that's fails, not the bond between the metallic overlay and the substrate.

MARTHA MCNICHOLAS: Okay.

RANDALL GRANT: It's on there real good.

MARTHA MCNICHOLAS: It's more at a molecular level than -- all right. I think I

understand it now. The supersonic spray sounds a lot more important.

RANDALL GRANAAS: It's a pretty sophisticated operation.

MARTHA MCNICHOLAS: Not like my spray gun. Okay, thank you.

RANDALL GRANAAS: You're welcome.

CHAIRMAN DAVID VICTOR: That's not to disparage your spray gun. When I first heard coupon a long time ago when we were talking about the stress corrosion cracking study I thought I was going to get 2 for 1 Doritos. Apparently it was the term in the industry for those sample piece of metal.

Looks like Dan Stetson would like the floor.

Dan, the floor is yours, then John Taylor.

Dan.

VICE CHAIRMAN STETSON: Thanks, David. Just out of curiosity, how do you heat the canister and what temperature do you -- is it heated from the outside or the inside? How do you heat it? In what temperature -- do you reduce the temperature over time so it mimics the temperature

of the other canisters?

RANDALL GRANAAS: So we put in a series of -- a set of heater elements inside that canister, and I could send you photos later of it, and but it's huge set of electrical heaters that we put inside the canisters and we seal the lid. And we can control that externally, the wires coming out of it, and we look at the temperature coming out of the exhaust flute, and we make that -- we use that and we measure that and compare it to, say, all the other canisters, there's 73 of them out there, and we find the lowest temperature out of 73, and we set that temperature to be lower. And we suggest as the fuel decays, then we will adjust the temperature on the test canister lower.

VICE CHAIRMAN STETSON: Thank you.

RANDALL GRANAAS: You're welcome.

CHAIRMAN DAVID VICTOR: Thank you.

I think John Taylor wanted the floor.

John?

JOHN TAYLOR: Yes, Randall, I had a question: When the canisters come out of the cooling pool and they're placed in -- they're pressurized, I understand with helium --

RANDALL GRANAAS: Correct.

JOHN TAYLOR: Does the repair process allow for that pressurization to hold back or contain the pressure or is that even an issue?

RANDALL GRANAAS: They're pressurized at about 45 PSI, they're actually at a higher temperature when we pressurize them, so we correct that, at about 290 degrees Fahrenheit they're pressurized at about 60, 65 PSIG. What our goal is we're not going to get a through-wall crack. We will fix this before it's through-wall so the helium isn't going to come out.

I do know that the spray, the DOE had this in their report that they issued last year, they repaired a pipe with a 1000-pound per square inch leak and they applied the spray, and they were able to seal it. But, again, we don't want to get there. We want to find the degradation first and mitigate it before it actually goes through the wall of the canister.

JOHN TAYLOR: Thank you.

RANDALL GRANAAS: You're welcome.

CHAIRMAN DAVID VICTOR: Thank you very much. Any other questions? I'm not seeing any, so let me ask my three questions very quickly, by

the way, Randall, if we learn more about actual applications of this like the 1,000 PSI inside service repair, it could be great to learn about this those, this is less science fiction and more reality. I didn't know about the applications on the Apache rotor and the B-1.

So three quick questions, I'll just ask all three right now and let you know answer them, one is you're going to be inspecting every two and a half years, there's been a lot of concern about damage to the canisters when they were loaded and so on, is there any damage to the canisters during the inspection process? Is there a tradeoff involved there?

Second is a while ago we heard about Russian dolls, putting one canister inside of the other. Now we've got some metallic overlay with the EPRI work, we have one or more of these five technologies in addition to the Russian dolls and metallic overlay. So what happened to the Russian dolls? Are they no longer -- people still excited about them or the Russian dolls potentially viable?

And the last question is about the ASME repair standard, just curious as to when you think

ASME will have that standard in place?

RANDALL GRANAAS: Okay. First question, damage, the robot actually -- not that it would damage it, the robot, the wheels stick to the inside of our divider shell, which is carbon -- carbon steel, so it doesn't even touch the canister at all. So, again, it's a lightweight aluminum robot. That doesn't touch the canister there's no damage.

There's a rigging evolution to take the lid off, it's a 35,000 pound lid, so that's an industrial safety hazard, but otherwise, there's no hazard at all.

The Russian doll, that could -- we could deploy that, but we really prefer this metallic overlay. You can do many canisters rather than one. It's possible but that's not our emphasis right now on the Russian doll.

And then the ASME repair, hard to say, but I'm hoping it will be done as quickly -- it took five years to get the standard for inspection, so an educated guess would be five years for the repairs to be approved by ASME. We don't for certain, but that would be the best projection. ASME doesn't move fast. That whole

process moved very slow.

CHAIRMAN DAVID VICTOR: I think I'm happy when folks are setting standards that are going to be followed widely that we don't rush them so --

RANDALL GRANAAS: Absolutely.

CHAIRMAN DAVID VICTOR: Okay. Thank you very much.

I think we want to go back to Doug Bauder who's going to introduce the next segment of the meeting, which is the decommissioning update. Doug, the floor is yours.

DOUG BAUDER: Sorry. Thank you, David. A few technical difficulties.

I'll hand it over to Vince to talk in some detail about the decommissioning work. Also I would like to, at some future point in time, bring Bob Frasier in, our site SCS lead to talk in some more details about the work potentially at the next meeting or the meeting thereafter for now, Vince, you have the floor.

CHAIRMAN DAVID VICTOR: I just want to say SDS is the SONGS Decommissioning Solutions so that's the contractor that is over -- doing and overseeing the work on your behalf, you're ultimately responsible for it, but that's the

group, and we have an invitation after them and so we'll bring them in when the time is right. I'll look forward to that.

DOUG BAUDER: You bet. Thank you.

VINCE BILOVSKY: We can go to the next slide, and as Doug mentioned earlier, we really wanted to focus under the pandemic protocol we really wanted to focus on getting the fuel safely stored and making our transition to an ISFSI-only site. So we've been going a little slow on the decommissioning activities, but we're gradually increasing them at the site for the remainder of the project. We have made a few modest accomplishments.

The main items that we've been focusing on involve the preparation for the dismantlement and removal of the systems located inside the two big domes that you see on the highway, which are called the containment buildings. There's a lot of stuff inside of those buildings. It's where the central plant systems are located, you know, made up of components, piping, tanks, cabling, things like that.

Some of those components are pretty big like the steam generators, pressurizer, the

reactor coolant pumps, but the most significant large component that takes a lot of effort to remove is the reactor vessel, and that's because the reactor and especially the internal parts were activated during the operating history. So that work is done under water to protect the radiation and it's done with some pretty sophisticated equipment.

If you refer back to that large rail shipment that we talked about that was talked about earlier, the unit 1 pressure vessel, that was actually shipped in one piece but it was much -- it's a smaller reactor, so the reactors in units 2 and 3 are much bigger, and we're going to need to cut those up into segments. Like I was saying before, that will be done under water with specialized equipment.

So most of the work we've been doing lately and the work that will continue for the next few months is the preparation for cutting up and removing those reactor vessels and their internals, such as these tasks that are listed here on this slide.

If we could go to the next slide, Lorraine or Manuel. I'm not sure who is running

it right now.

What we see here is one of the two containment dome buildings, and it shows the current opening that can be used for bringing equipment and components in and out of the building but now that the plant isn't operating anymore, we can make that opening much bigger, which will make it easier to bring the equipment inside the tools that we need to dismantle and bring the package waste outside.

So if we go to the next slide and take a look at a closer, zoomed-in look at the containment building. On the left side we see the current equipment hatch opening and you can see some workers inside there. And then on the right we show where that, you know, equipment hatch is and where we can -- where we're going to make it bigger. We cut out that portion and make an larger opening there.

So we can go to the next slide.

I think here we have a high level depiction of the project schedule. The actual schedule has tens of thousands of activities in it but just looking at the big picture here, the top line item we see the main focus going on between

now and 2024 where we're going to be removing all the systems and components from inside the containment domes. Also, in parallel we'll be taking down other systems and structures that surround the domes, but the main path what project managers call the critical path goes through the containment buildings.

Then if we go down to the fifth line starting around the middle of 2025 after we have everything removed from the insides of those domes, that's when we'll actually start the demolition of those buildings. We expect that to be finished about a year or so later in 2026.

So let's go over the next slide. And on the last two slides here I'm going to talk about how we're going to ship the plant away. We want to use rail cars as much as we can. Rail cars are much more efficient than trucks, because we can get a lot more material at a ratio of about 6 to 1. We're going to minimize the truck shipments as much as possible, and when we do make them, we'll do our best to make sure they're off peak hours so we don't negatively impact the traffic.

Go ahead on to the last slide. We'll talk about a little bit about low-level

radiological waste shipments. See here a picture of the unit 1 reactor pressure vessel that left San Onofre on May 25th and arrived in Utah on July 14th. That's the same component that David showed in one of his slides when he made his visit there to Clive.

When it comes to low-level waste, there are four classifications: Class A is the lowest. It's the most benign and then class B and C get progressively more radioactive. The highest radio -- the highest activity waste among the low level classifications is called greater than class C.

There's a link at the bottom of this slide that provides details on how that classification is determined it. I'll warn you it's pretty complicated. For our purposes, for the decommissioning of San Onofre, I'll say that nearly all of the waste falls in that lowest level category, the class A. There's going to be about 285,000 tons of it. All of that will go to Clive, Utah just like the unit 1 reactor pressure vessel did and almost all of it by rail.

There will be a small amount of the class B and C waste, and they go by truck to a facility

in Texas, but that should only be about six or eight trucks worth total, very small amount.

Last, we'll also have a small amount of greater than class C waste. This waste comes from internal structures of the reactor that were closest to the fuel during operation. For the greater than class C waste, we treat it the same way as spent fuel, so that's stored on the ISFSI pad.

We're going to have 12 canisters for it total, for both units combined. There's already one canister of greater than class C waste that's out on the pad right now that we have from the unit 1 decommissioning.

That's what I have for today. There will be plenty more updates in the future meetings, and I'll be happy to answer any questions.

CHAIRMAN DAVID VICTOR: Okay, thank you very much. I've got one but the question I just want to underscore the volume we're talking about the here. This is almost 600 million pounds of class A waste, just an extraordinary amount of material.

I want to see if anybody has any questions or comments from the CEP before I ask

mine. I don't see any so let me just ask my question which is about the schedule. One of the effects of hiring a company that's a specialist in decommissioning is that I believe almost everywhere in the country the schedules will run faster and under budget. I'm curious as to whether we should expect that here, potentially see the domes come down earlier than 2025 or 2026 or if that's already built into your schedule, or how we should think about the firmness of that very important milestone which will be visible from the highway?

VINCE BILOVSKY: As I mentioned, the critical path goes through the -- it's removing the insides of that containment building and the reactor pressure vessel and the reactor vessel internal segmentations will take a solid two years to perform, and then you have the large component removals, some take place in parallel, some afterwards, there's a decontamination process, so that's pretty well scheduled.

So I think 2026 time frame is very much realistic for when we would expect to see those domes to start the demolition process.

CHAIRMAN DAVID VICTOR: Thank you very

much.

First I have Marni Magda, and then Martha McNicholas.

Marni, the floor is yours.

MARNI MAGDA: In your slide 16 you said some higher level radiation would need to be moved from the domes and we're now looking at that specifically, the 35 tons that's the B and C level waste that's going to Texas, has that been an approved place that it can go to, and when do you think that will ship?

VINCE BILOVSKY: Yes, that's an approved location. It's Waste Control Specialists, which is in St. Andrews, Texas. That is the facility that is licensed in United States to receive class B and C waste.

MARNI MAGDA: Thank you.

CHAIRMAN DAVID VICTOR: Let me just say before we go to Martha, that site, St. Andrews is one of the two sites that's an interim storage site that we've been talking a lot about. It's on the Texas side of the border, the other site is the site in Eastern New Mexico on the New Mexico site, although the two sites themselves are very close to each other. There is some discussion at

Clive, not about going to class C, but I think about upgrading some parts of the facility that may be a little bit of the material could go to Clive, but I think in terms overall volume, the real story is mass amount of volume going to Clive, and then small amount of volume by truck going to Texas.

Martha, looks like you would like the floor. Martha, the floor is yours.

MARTHA McNICHOLAS: Yes, thanks, Vince. This is really interesting. I'm trying to visualize cutting up a reactor vessel under water. So is there a giant swimming pool in there that we're using to cut things up? This isn't the spent fuel pool that we're now reusing to chop things up in?

Sorry to be so blunt on that, but I'm trying visualize this. Maybe in our next presentation can you maybe do a schematic or something to kind of help me understand how this is going to work inside the containment structure.

And the other thing is I want to confirm those last 125 tons will be stored in basically a Holtec canister there next to the spent fuel, is that what I understand?

VINCE BILOVSKY: I'll start with that, answering that question. We're actually going to the back to the first system which is the horizontal NUHOMS transnuclear system. The canisters are very similar to -- the outside of the canister has the same dimensions as the fuel canisters, but the components that -- the segments that go in there don't have the same shape as the fuel assembly. They're a little bit different on the inside, otherwise they go right into the same horizontal storage modules.

Going back to your original comment or initial comment, no, this is a different location. This is in containment, not in the spent fuel buildings. In containment, the cavit where the reactor vessel is has the ability to be flooded up so I wouldn't call it a swimming pool. We don't tend to do any swimming in there. We'll be doing it underwater, and it's very specialized equipment that does the cutting underneath the water.

MARTHA McNICHOLAS: Okay.

VINCE BILOVSKY: We put it into containers that are appropriate for the type of waist that go into them.

MARTHA McNICHOLAS: Okay, thank you. If

we have a chance in one of our next meetings to kind of show that schematically, I would love to see that.

VINCE BILOVSKY: Absolutely.

MARTHA McNICHOLAS: Thank you.

CHAIRMAN DAVID VICTOR: That would be great. I think there's also video at other sites of this being done robotically, and maybe we can get a couple of those videos and maybe figure out how to play videos as well.

On the video theme, the video we tried to play earlier is now posted on songscommunity.com so for those of you, you don't need to leave the meeting right now, if you want to see the video, it's on songscommunity.com and we'll figure out how to get it to play at a future meeting. It's already posted there.

I don't see anyone -- John Taylor, the floor is yours.

JOHN TAYLOR: Randall, this might not be a question for you, but in regard to the payment for this storage, is this an annual payment that San Onofre will have to or ratepayers will have to pay indefinitely, or is this a one-time fee to take the waste and store it?

VINCE BILOVSKY: It's captured within the decommissioning general contract we have with Songs Decommissioning Solutions.

JOHN TAYLOR: So then it doesn't become a hundred year payments or whatever that continues to be charged to ratepayers, that's how I read what you're saying?

VINCE BILOVSKY: Correct.

JOHN TAYLOR: Okay. Thank you.

CHAIRMAN DAVID VICTOR: And they own and operate the Clive site.

I don't see any other comments or questions. Martha, your mic is still on, did you want to say -- no, okay.

I want to move on now to the next segment. Dr. Eric Goldin who is radiation protection professional is going to talk about the liquid batch releases. These have gotten a lot of attention, and I've seen a lot of stuff in the media that's not connected to the radiological science. There's been some signs posted. I'm sure members of the CEP will have comments about that.

Let's first get a few slides and some input from Eric Goldin as to where we are with the

radiological science regarding these releases and what's going on with them.

Dr. Goldin, the floor is yours.

DR. ERIC GOLDIN: All right. Thank you.

Good evening, everyone. My name is Dr. Goldin. I'm the radiation safety specialist with over 40 years of experience, and I would like to present some factual information about the batch releases of water from the plant that is slightly contaminated with radioactivity. This is no different than what's been done at San Onofre for over 50 years and has no impact on the local environment.

I would like to also note that the activity levels are much less than the discharge of waste water from the typical sewage treatment plant that receives medically administered waste water from people who have received radioactivity in the treatment, for example, using iodine 131 in the diagnosis and treatment of thyroid disease.

If we can go to the next slide, we'll talk briefly about how the process is done. Basically the water is accumulated in very large tanks in the plant, recirculated through filters and ion exchangers to remove as much of the

radioactivity contaminants as possible.

Samples are taken and analyzed in a very sensitive instruments in the laboratory, and then a permit is written that has limits on radionuclide concentrations, calculates the estimated dose to a person who could be exposed to the radioactivity. Radiation monitor set points are developed, and all of this is reviewed by management and signed off before anything can happen.

Once that approval is received, then the operators can start the required pumps, discharge pumps from the tanks, and that dilution pumps in the plant and discharge the water out to sea. It goes out through the discharge conduit and enters the ocean in the diffuser section, which is over a mile off shore and at the bottom of the ocean about 50 feet below sea level and where it mixes with the rest of the ocean water, vast quantities of ocean water.

The next slide will show you that -- the next slide. So the radiation exposure is estimated by using the concentration of the radioactivity at the point of discharge, which is the diffusers, and is therefore, very

conservative. It doesn't take into account any dilution with the ocean water. The doses based on someone eating seafood that would live at the site of those diffusers and would accumulate radioactive contamination in the food, fish and crustaceans, like lobsters for example, and the assumption is people would collect that sea life and eat fairly large quantities of it through the year.

The radiological environmental program, the RENP program, what that does is it's a requirement by the Nuclear Regulatory Commission, and includes sampling the fish, the crustaceans, ocean bottom, ocean water, and other media in the area, kelp, for example, ocean bottom sand, and samples those media, analyzes them by a third party laboratory, and then the data from all of that sampling and analysis is reported annually to the Nuclear Regulatory Commission and the state, and those reports are publically available.

They are the most -- the more recent ones are on the SONGS Community website, and you can go back and research older ones that would include data from when the power plant was operating on the NRC's website. You just go to NRC.gov and

look for the effluent reports.

The estimated dose from all the 2020 batch releases is 0.5 millirem, and the next slide will show you how to compare that to other sources of exposure to the average person. The average natural background for a U.S. citizen is about 310 millirem, roughly 1 millirem per day. These are annual doses on the chart.

Everybody gets about 14 millirem per year from the natural potassium 40, which is radioactive in the human body. Most people get dental x-rays and perhaps a chest x-ray once in a while, but the average for medical exposures and dental exposures is also about 310 millirem -- excuse me -- per year. A cross country roundtrip air flight is about 5 millirem, and the NRC occupational dose limit for workers is 5,000 millirem.

The dose limit for members of the public, the EPA sets a value of 25 millirem per year, and the NRC limit is 100 millirem per year. There's slight differences in who and how those numbers apply, and that's why they're different. Basically you're talking about 25 millirem per year from the EPA, whereas compared to the total

for all the batch releases, and this is an upper limit estimate, is about 0.05 millirem.

The next slide, please.

This is the key question: Is it safe? The answer is yes. The last batch release, the estimated dose, and this is very conservatively calculated was 0.000722 millirem. That's assuming somebody is eating fish that lived basically at the discharge of the conduits.

Less than one hour on the beach yields -- I say the beach but it could be anywhere outdoors -- yields 25 times more dose than that average release dose. That natural radioactive exposure is due to cosmic rays, terrestrial radiation, and radon that comes up out of the ground.

If you drank all 20,000 gallons, and I use the number 20,000, the average batch release is about a little over 17,000 gallons, but if some could possibly drink all 20,000 gallons from one of those batch releases, the dose would still be 4,000 times less than the EPA drinking water limit. And the estimate for the entire year, again, is 0.051 millirem, compared to a natural background of about 1 millirem per day. It's very

small fraction.

The next slide draws some conclusions, and the answer is that these levels are very far below regulatory limits, which are safe levels established by the federal agencies, such as the EPA and Nuclear Regulatory Commission and well below the water board limits.

There are national and international scientific organizations that note that any dose less than about 10,000 millirem per year have no measurable effects in humans, and we're talking about very small fractions of 1 millirem.

So the conclusion is it's very safe for swimmers, surfers, the public, anybody who wants to come to the beaches near San Onofre does not need to worry about any of these batch releases, and that's all I have. Welcome to any questions.

CHAIRMAN DAVID VICTOR: Okay. Thank you very much, Eric. This is a perennial subject of the disconnect between risk and perception, but this is one of the most extreme cases that I've ever seen where the risks are literally a million times or more lower and very well documented and some of the public discussion is very different.

I just want to pause for a moment and see

if any member of the CEP would like to comment about this. I think Kathy Ward might want to. I don't know if Kathy is on the call today. I don't see her name. Maybe somebody else is signed in on your behalf. If so, why don't you open your mic and make your comment or, if not, if anybody else from the CEP wants to comment about this topic and about some of the public reaction to the topic, now would be a good time to do that.

Okay. Yes, Marni Magda.

MARNI MAGDA: Thank you. I just want to say that I have many friends here in Laguna Beach who kind of want to know what's going on and may be afraid with some of this advertising, so it's important that we get this out to all the members of our meeting so they know that they're safe.

CHAIRMAN DAVID VICTOR: I would welcome your counsel on that. I read a lot of the media coverage, and I see that some of the key pieces of information that Dr. Goldin has presented are in the media coverage. I thought the OC Register piece in this area was particularly well-balanced and informed, and a lot of other good press coverage, mainly frankly in print.

If there are other things, maybe some

information should go out in the quarterly e-mail or mailing that goes out. If you have other ideas about things that should be done, the signs that I've seen are unbelievable. I completely understand that people might be a little terrified seeing some of these signs, and I don't quite understand what is motivating folks. It doesn't seem to be connected in any way to any of the science.

MARNI MAGDA: Thank you. Yes, that's what has people frightened is they've seen those signs. Thank you.

CHAIRMAN DAVID VICTOR: I'm sure there will be public comment on this, and I know, Eric, you've got a lot going on, but if you wouldn't mind sticking with us until the end of the meeting in case there's public comment about this subject, I would welcome your responses when we get to that stage.

I don't see any other members of the CEP who would like to comment right now, so we'll move onto the next topic, which is the issues surrounding the Wheeler North Reef Expansion Project, and Jenny McGee is going to guide us through the slides on that.

Jenny, the floor is yours.

Jenny McGee.

CHAIRMAN DAVID VICTOR: I see you're online.

Doug, can you --

JENNY MCGEE: I was on mute. Can you hear me now?

CHAIRMAN DAVID VICTOR: Yes, loud and clear.

JENNY MCGEE: I was on a roll too. Thanks everyone, good evening. I'm Jenny McGee. I'm the project manager for the Wheeler North Reef Expansion Project. Wheeler North is a manmade artificial reef constructed project approximately one and a half miles off the coast of San Clemente.

Wheeler is a kelp reef specifically designed to support the formation of the biotic rich giant kelp forest ecosystem. I look at the ecosystem as a rain forest of the ocean. Some people can compare it to the giant Sequoias.

The giant kelp can grow up to two feet a day and supports a diversity of sea life. The creation of the reef on the coastline will support rich sea life teaming with biodiversity and

benefit local communities in recreational boating, fishing, and diving.

Next slide.

There we go. So the reef is constructed as a mitigation project to replace impacts to the giant kelp habitat associated in the operation of Songs. In 1991 technical study, impact studies revealed that SONGS cooling system concluded that adverse impacts occurred to the San Onofre kelp bed community due to the plumes that were generated during the mixing of the cooling water that was discharged through diffusers approximately one and half to two miles off shore.

The Coast Commission requires Edison to create an artificial reef to replace the ecological resources that were lost during the 32-year operational period of SONGS. In 1998 as we constructed the experimental reef, which is shown here in yellow, the tiny little squares you see, there were modules of different types of materials and compositions.

After five years of studying, the most successful materials and composition was used to build out the mitigation reef, which is shown here in red. The mitigation reef was constructed in

2008 and consists of 150 acres of quarry rock. Once built, the reef was named after the late Dr. Wheeler North, the prominent kelp ecologist and a dedication plaque was placed at the end of the San Clemente pier.

The mitigation reef is studied each year by an independent team of scientists, and is held at two different types of performance standards. The first is called absolute standards. Absolute standards are tied to the mitigation losses of the San Onofre kelp bed and are measured by calculating fish standing stock, kelp area, hard substrate, and invasive species.

Then we have relative standards. Relative standards compare Wheeler to other natural reefs to measure the development of ecosystem and reef ecology. And what is measured for these standards include fish, alga species cease and invertebrate species. The monitoring data over nine years revealed that Wheeler is functioning very much like the other two natural reefs in the area that it's compared to, and has consistently met the relative standards each monitoring year.

However, Wheeler has not consistently met

the absolute standards. It's fallen short in meeting the required 28 tons of per year of standing fish stock and 150 acres of kelp area per year.

The scientists concluded that the reef, while functioning like a natural system, is too small to meet these absolute standards and SCE was required to construct an expansion of the mitigation reef.

In 2019 and 2020 SCE constructed phase 3 shown here in green and -- phase 3 shown here in green and blue. 2019 was in green and 2020 was shown in blue here on the map known as the Wheeler North Reef Expansion Project, which totaled 202 acres bringing the entire reef size to 376 acres making it the largest manmade reef in the world.

Next slide.

There we go. So a little bit about during our permitting process I wanted to talk to you about our tribal consultation. So SCE as a component of the permitting and licensing process, state and federal agencies are required to evaluate the presence of tribal cultural resources. The Acjachemen nation of Juaneno band

of mission Indians raised concerns during this process that tribal cultural resources could remain within the project area which have been occupied 12,000 years ago prior to being inundated by post glacial rising sea levels.

To investigate the possibility of tribal cultural resources they request an archeological reconnaissance dive survey be conducted by a tribal representative. Although no tribal cultural resources were identified during the survey, according to the records, the tribal cultural resources was present in the vicinity of polygon 35, which you see here in the red circle.

The tribe requested SCE remove this portion of the project to protect the resources. SCE worked with our agency partners and our ocean engineer to reconfigure the project and expand other areas and were able to successfully eliminate the polygon and avoid impact of the tribal cultural resources.

At the close of the project, the tribe will also conduct a post-construction reconnaissance dive, and SCE will team with their agency partners to document the successful consultation process. It was pretty rare, so it's

pretty valuable.

Next slide.

All right. So during construction of the 280 acre reef, three full-time marine animal monitors were on the construction vessel to prevented impacts to sea life. Monitors were responsible for identifying species observed during construction and notifying construction personnel if an animal moved into the exclusion zone. Monitors had stealth work authority, which was communicated over a dedicated radio channel to ensure the immediate response by construction teams.

The protocol was conducted -- this protocol was conducted to avoid collisions or harm to animals. I'll just note during our 2019 construction season we had a total 17 stop work orders and we had several more in 2020, I don't have the numbers yet, but it was quite a bit more frequent, likely because we were closer to the end point preferred.

In the mornings it was common to see a sea lion hauled out on the rocks to rest. Shown here in the picture on the slide is a regular pup we nicknamed Rocky. He seemed to come out

frequently and seemed to have an infinity for the highest point on the rock.

Next slide.

In constructing the expansion reef, SCE and the Coastal Commission agreed to some changes in the way the reef is monitored and how mitigation credit is counted. Now that SONGS is in decommissioning, SCE can define the operating life of the plant, and therefore, tie in the mitigation compliance period of the reef.

Second, by adding the remediation reef provides a high level of confidence that SCE will consistently meet fish bio standards, so the absolute standards for fishing in kelp area are shifting away from annualized losses and instead will be mitigated based on a total losses. Credit will now be assigned based on attainment of cumulative standard in place of an annual standard that I mentioned previously.

Third, since Wheeler has consistently met the volume performance standards for the last ten years, demonstrating its functions very much like a natural reef scientists have determined it's appropriate to reduce monitoring to annual inspections for evaluation of relative standards.

And, lastly, SCE will continue to conduct the multibeam sonar surveys every five years. These surveys are done to monitor the movement of rock substrate. They are also used to calculate the percent cover of hard substrate available for kelp to colonize. This is important as giant kelp strongholds will break off and create floating reefs and this makes available for new colonization driving continuous kelp equality for success that's essential to the kelp ecology.

On a closing note, I would like to share that as a Dana Point local having spent a great deal of my life and career on this section of the coast line, this project will be always a highlight. Looking at the future, few terrestrial projects offer the permanence of the environmental benefits as the reef because upon meeting performance standards, all following years will yield continuous benefits to support this important and diverse habitat. This is something I could not be more prouder of. I'd be happy to take any questions.

CHAIRMAN DAVID VICTOR: Excellent. Thank you very much. I'm sure there will be some questions. I'm curious maybe we could go back. I

know Dan Stetson wants the floor.

If you could go back quickly to slide 44 to orient all of us. Could you help us -- help those of us who are visually challenged, so I understand the colors, those are different. Phase 1 is the test pieces, phase 2 is the initial build-out, and now we've got new phases, but help us understand, orient us a little bit as to what the gray is and what we're looking at. Which way is north?

JENNY McGEE: Sure. And I do apologize, we don't have much context for this graphic, so the gray areas is the existing hard substrate. So this is area that's available to kelp colonization as part of the natural formations of the coastline. You can see at the top part of the screen there's a little etching there that says "SC pier," that would indicate the landmark milestone at the San Clemente pier, which is kind of a midpoint.

The build-out, although we kind of tucked in some build-out in and around the first mitigation reef, most of the expansion occurred north of San Clemente pier and extends right up to about where the new outlets are there in San

Clemente, right there as you transition into Capo Beach.

CHAIRMAN DAVID VICTOR: Okay. Excellent. That's very helpful.

Dan Stetson the floor is yours, and I'll see if anybody else would like to comment. Dan.

VICE CHAIRMAN STETSON: Thanks, David.

Hi Jenny.

JENNY McGEE: Hi.

VICE CHAIRMAN STETSON: I was out there on the reef yesterday with a team from Cal State Long Beach, and we were repositioning a great white shark monitoring device to check on the right sharks passing through there, and I am very excited to see the expansion of the reef and want to thank you and all team that worked on that.

My question is, as you note a team from UC Santa Barbara Dan Reed and Steve Schroeder from UCSB would come from the ocean institute and present the annual report on the monitoring, is that going to take place, or what's the outreach for the public in terms of the results of the monitoring?

JENNY McGEE: Yeah, great question, Dan, and thanks for the support and encouragement. So

that conference was held earlier this year. We did do a virtual platform much like this one, I want to say it was in June, yeah, but I did have that information and materials, happy to share them with you. Maybe I can, Dan, with you. We can get that to you one way or another.

CHAIRMAN DAVID VICTOR: -- the CEP and put a link up on songscommunity.com.

JENNY McGEE: Yeah, we'll get their information and I know it's probably available so we'll get a copy and we can post it to the website, and they also issue a report and that will continue, Dan, so as you know all the data is public knowledge, and so they were going to continue to present the annual workshops, and I look forward to seeing you maybe next year we can do it in person.

VICE CHAIRMAN STETSON: That would be great. Thank you.

CHAIRMAN DAVID VICTOR: Okay. Well, I'm also delighted your back on land after messing with the sharks, Dan, so that's good news.

Anybody else from the CEP like to make a comment or question about this?

Okay. I think Kathy Ward was on, doesn't

seem to be on. So we're sorting that out. Maybe we can go to the next segment and the last major substantive segment before the break and public comment, which is an update about the strategic plan, and for that I'm going to give the floor back to Manuel Camargo.

Manuel, the floor is yours.

MR. CAMARGO: Very good, David. Thank you and thanks everybody for your attention. So just would like to provide an update where we are on the strategic plan development process. So as been discussed earlier in meeting, at this state especially when fuel transfer is completed, you know, this is one of the main themes for us, one of our main areas of focus is doing what we can to explore our opportunities to get the spent fuel offsite.

So if you go to slide 49, and it is Lorraine who is continuing to fill in for me given my computer glitch this evening.

So here on slide 49 I would just say regarding the purpose of this strategic plan, of course first and foremost, it is to explore the safe and reasonable, commercially reasonable, relocation of SONGS spent fuel to an offsite

facility. That would be a licensed NRC facility whether it's interim or a permanent disposal. It was prompted by a 2017 filament agreement that was in connection with the expanded ISFSI, what became the Holtec ISFSI, and then finally in terms of the purposes, it also gives us an opportunity or a platform to engage with the whole range of external stakeholders. So that's just a bit on the purpose of the strategic plan.

So if we move to slide 50, first, if you had heard from us before, the first bullet here relocating the spent fuel is a priority for the team here at SCE as well as our co-owners, so that's for sure. In terms of what is the plan, actually it's a little more complex than that, it winds up being sort of a plan of three different elements of what will be eventually be three different volumes.

The strategic plan is what we one that we talked about most about up until now and a little bit about what the plan is and is not. The plan is not like a request for proposal where you look to come out with a single winner at the end of the day, rather, the strategic plan is to explore a portfolio of alternatives that we at SCE can

explore and look to keep open.

You know, one of the things that I know we discussed here in the CEP in the past if you look at our current situation, if we have all of our eggs in one basket as a country in the Yucca mountain basket, we know that that's not serving us terribly well, so we want to make sure we have some optionality as we move forward, as well as not all about getting the spent fuel offsite. There's a portion of the plan where the -- it explores near term actions that we at SCE can take in order to make sure we as a site are prepared and that we are looking at the actions that we can take to ensure that our spent fuel is ready for pick up. That's a key piece as well.

The second component is a conceptual transportation plant. What does that mean, conceptual transportation plant? The challenge, of course, is that we want to take action now in the interest of readiness, but in the present there is no licensed facility to send spent fuel. So we assume with the conceptual transportation plan that the spent fuel is going to -- somewhere to the Southwest U.S., so it's not going out by the Pacific or anywhere else.

So that really gives us at SCE the opportunity to understand the steps, some of the timing, sort of T-minus bases, you know, what are the steps and timing associated with moving spent fuel from SCE to a storage facility that, again, is presumed to be in the Southwestern United States.

And then the third sort of volume or component within the plan is an action plan. So the action plan is what we at SCE will use. It will be based on findings and recommendations and the strategic plan and the conceptual transportation plan, that they boil those down to practical actions that we at SCE can take in order to leverage some of the findings and recommendations in the plan and guide the implementation of the effort over time.

So next on slide 51, this is a little bit more about the development of the plan. So here we do have a lot of help which is great. We have guidance being provided by the experts team. This panel has heard previously from some members of that team. Tom Isaacs in particular has participated in at least a couple of CEP meetings, but that expert team is one that we assembled, and

when we did so we brought in folks with a variety of expertise inciting licensing of spent fuel storage facilities as well as transportation and the other field that you see referenced here, so we pulled that team together, and they're guiding the effort.

Second, the other type of help that we have is from the North Wind team. The North Wind team is doing some writing and analysis, so just very simply if you want to think about it, they have pen to paper, if you will, in developing the strategic plan and conceptual transportation plan on behalf of SCE with guidance from the experts team.

So sort of a lot of players but we have a variety of expertise on these teams. The experts team as you know, you met Tom Isaacs, we also have support on that team from folks like former NRC chairman Allison McFarland. This panel heard from her back in the 2015 time frame. North Wind team also had some pretty strong talent, sort of the most notable name that folks might recognize is Dr. Ernie Moniz, who is the former secretary of the department of energy.

There's development of the plan also

includes stakeholder engagement. You see here reference to the website. If you go to the website songscommunity.com, on the lower part of the landing page you'll find an area dedicated to this effort. If you go to that page, you'll see there's an opportunity for any member of the public to click on it (due to technical difficulties, there is no transcription for 2 minutes) -- working with others including the CEP will be very important as we look forward.

That's where we are as of today. Again, you'll hear more at the next CEP meeting. Let me pause there, David, to see if there's any questions from you or any other members of the CEP.

CHAIRMAN DAVID VICTOR: Excellent I appreciate that update. I think that's going to be super important -- (due to technical difficulties, there is no transcription for 1 minute and 32 seconds) -- the action plan here is concerning what other people are going to do, what's going to happen in congress, what's going to happen in politics, whether our community to take Gene Stone's advice will stay together and stay focused on area of tremendous common

interest.

What happens in other communities, we see the politics in New Mexico becoming a bit unglued. Politics in Texas not so much right now. So I think we got to recognize that there are action plans guided by very smart people. I talked to Ernie Moniz about this in some detail. There's a terrific group people you have working on this. We have all the smarts in the world on what the best thing to do is doesn't change the fact that you're dependant upon other folks. We need to pay attention to the action plan to how we get other players in Washington to be helpful.

The second related comment is I think we need to look closely at the option. One looks closely at the options here there's a lot of things that could be done, a lot of places we can imagine the spent fuel going. We got to have some sense of realism. We got to come up with good chips of effort. We got a chessboard on which they're squares and things we can do. We got to figure out which squares to put most of the effort on so we don't get distracted by some shiny square over here in the corner that will be fun to think about but isn't realistic. I know that's

something people are still working on and figuring how to assess the realism of this and the options that will vary over time, but we got to stay focused on things that matter.

I wanted to see if there's any other CEP members, I don't see any comments on this topic from anyone else. And so I want to see if there's anything else the CEP members want to raise before we take a five-minute break and we go to public comment period of our meeting.

KATHY WARD: David, this is Council Member Ward, can you hear me?

CHAIRMAN DAVID VICTOR: Yes, yes, loud and clear. Thank you so much. I'm looking on my screen for your symbol and I couldn't find it. Please, the floor is yours.

KATHY WARD: I appreciate it.

Going back to the signs that were in the public right-of-way. I wanted to let the board know that was in the City of San Clemente there were signs put out that seemed to coincide with the recent water release from the plant. They were very scary and they said "Warning or caution, swim and surf at your own risk," and those were put on our beaches. And so I think that those,

first of all, they're not allowed by the City of San Clemente. We actually regulate all signage in our city, including temporary signs and so we will remove those. We can maybe -- I'm hearing myself echo so --

CHAIRMAN DAVID VICTOR: I think you need to turn down the volume on your computer.

KATHY WARD: On me -- okay. We will regulate those, but what I want to say to any group out there that put them out is that as they said earlier, it didn't seem to be tied to any science, and so we know that it is safe what is released from the plant, and that has been done for many, many years, and I have never heard from any residents a concern on that. If the group has a concern, please come to the city council at San Clemente, we meet twice a month, and you can say your concerns, and we will be more than happy try to educate our public if. In fact, I'm thinking of putting a link to the SONGS Community website on our website. That would be helpful where people can go and look at things and not contact SONGS.

I hope I say that, and I agree with David, and we have to agree that we have to get on

board where we are right now. Where we are right now is all the fuel is loaded into the canisters and other than the safety of the plant and keeping the canisters safe, our most important goal is to come together and try to find a way to move this waste to interim storage. That's the greatest thing that has come out of this community engagement panel since 2014 is everyone working together to figure out that we couldn't wait on the Nuclear Regulatory Committee, and we needed to find other ways, and so interim storage was one of the decisions that came, out and I think we need to be behind that.

I think signs warning people about radioactive water is not in keeping in where we are right now, and we need to move and work together. I hope we can do that. I'm willing in San Clemente to join any coalition and try to let that happen.

CHAIRMAN DAVID VICTOR: Excellent. Thank you very much for your remarks, also thank you for your offer for folks to come to your council meetings.

Let me suggest as one action item out of this, we need to make sure that the materials that

have been accumulated around the batch releases, the safety of the batch releases, empirical information around the batch releases there's one place on songscommunity.com site, maybe slash batch releases that has all that information, including links to this segment of presentation and the video from Dr. Goldin about what's going on and so people can go to one place and also so that the elected officials from the communities and other from the communities around the plant can have a place that they can point people to more factual information. Let's have that conversation but at the same time let's keep focused on what really matters here.

Okay. Thank you very much for that comment. Sorry for the technical glitches in getting you, Kathy, on the line here. We're going to take a five-minute break right now. It's 7:25-ish right now. We'll start at 7:30 with the public comment period. I believe first on the list will be Charles Langley and then Donna Gilmore. We'll take a five-minute break right now. Thank you.

(Recess taken from 7:26 until 7:32.)

CHAIRMAN DAVID VICTOR: Manuel, should we

get started?

MR. CAMARGO: Yes, David, I think we're set.

CHAIRMAN DAVID VICTOR: I want to make sure Dan and Martha are back?

MARTHA McNICHOLAS: I'm here.

VICE CHAIRMAN STETSON: Yes.

CHAIRMAN DAVID VICTOR: Thank you.

In the forum is a little complicated because there's some back and forth in the forum, but I believe Charles Langley is first, and then the next comment will come from Donna Gilmore, and then Kaleen Walker. So let's open the line on Charles Langley.

Charles, the floor is yours.

Maybe, Sanjay, once the line is open, let us know that's the case.

MR. GURAGAIN: It's open, David.

CHAIRMAN DAVID VICTOR: Charles, the floor is yours.

Charles, the floor is yours, Charles Langley.

Let's go to Donna Gilmore, and we'll come back to Charles Langley. Then after Donna Gilmore, we'll hear from Kaleen Walker. Donna

Gilmore, and we'll go to Kaleen Walker next.

Donna Gilmore?

Sanjay, if you could open Donna's line.

Donna, the floor is yours.

This seems improbable. Are we having some other technical issue here, Sanjay?

MR. GURAGAIN: No, I think we're fine.

CHAIRMAN DAVID VICTOR: You can fit any line between two data points. So let's go to the third data point. Which is --

DONNA GILMORE: Hello?

CHAIRMAN DAVID VICTOR: Is that you, Donna?

DONNA GILMORE: This is me. I don't know why but there was a line through so I'm here.

CHAIRMAN DAVID VICTOR: Welcome. The floor is yours.

DONNA GILMORE: My biggest concern is about the existing NUHOMS through-wall canisters. They are already up to 17 years old, and I've been trying to get from NRC or Edison the radiation readings at those rooftop vents. I know we had some measurements earlier, and you were involved in that, David, and they got some counts from the inland air vents but for some reason no one is

sharing the outlet air vent measurements, and that is the only monitoring system Edison has today to let us know if canisters are leaking or having some kind of problem. None of those 17 have any other way to do that.

So I would like to request that that information be shared with the public, number 1, and I don't need you to talk about all these other monitoring or anything else, just the data from those vents, that's number 1. And I don't understand why the reluctancy to give us those numbers. It makes the public and definitely myself suspicious that there may be failing canisters that could affect maybe the Coastal Commission giving you a permit to destroy the pools. That could be a reason to maybe not get the $4 billion of the decommissioning funds if there's problems with the canisters.

Also, in terms of transport, if you have leaking canisters, you can't transport those. If a canister arrives leaking in the proposed New Mexico or Texas facility, their written plan is to return to sender. And the -- there's -- I want to know if Edison is aware of the December 2019 Department of Energy Sandia Lab Technology gap

report. They've made number 1 priority the problem of short term through-wall cracking in these canisters. They initially didn't think it would be a short term evidence -- short term issue but that they have that information now, and they know there's no current solutions, and they state they need a way to repackage the nuclear waste.

I have -- on San Onofre safety I have a Swiss solution that has that report and also I think it's information on (inaudible) that manages their nuclear waste, and I highly recommend people (inaudible) that's the technology containers. And let's see, I think that -- let's see.

Anyway, I think that's -- repair technology, I researched repair technology. I NRC hasn't evaluated or approved it, and you have to be able to see what you're trying to repair and clean it out. It can't go around corners, it can't see hidden cracks so I -- I don't have time to go over here, but I have produced information and it's on the Coastal Commission website on San Onofre safety showing the concerns about the NUHOMS spray product that's supposedly can repair. I would like to see the copy of the ASME code you

referenced. It wasn't given to the Coastal Commission staff. They haven't seen what's in it, the one that they shared tonight. It wasn't in the Coastal Commission report. Thank you.

CHAIRMAN DAVID VICTOR: Thank you for your comments.

Next we'll go back to Charles Langley. I don't know if -- the timer doesn't seem to have a lot of relationship to reality. Start it at three minutes so we don't shortchange Charles.

Charles, can you hear me?

We're going to go the next to Kaleen Walker. Sanjay, if you can open Kaleen Walker's line.

Kaleen, the floor is yours.

KALEEN WALKER: Can you hear me?

CHAIRMAN DAVID VICTOR: Loud and clear.

KALEEN WALKER: Okay, good.

Also on that DOE Sandia Lab report that Donna just referenced, there's a technical gap. That means the gap in there (inaudible) or their technology. Edison and the NRC have continued to claim that even with the breach of canisters, there would be no radiological impact outside the defense line of the cracking. I don't know how

they can say that, but the DOE report has also put on top priority assessing the radiological risk due to loss of consignment due to stress corrosion cracking.

So I think that that's pretty serious that the DOE and Sandia Labs are looking at that as a short term problem. You can have all your talking points as public imaging but the reality is what it is. Nobody is going to want these canisters. The Holtec canisters are gouged and cracked. You cannot inspect pit corrosion. It's like a tooth, a rotting tooth. The dentist cannot look in your mouth and determine the level of the cavity.

They think they're going to go in -- we need a hot cell on site and get the stuff repackaged, and that's the sad truth of the matter. I'm not sure when you all are going to come to terms with it. I'm not sure if the stakeholders of Edison realize what's happening on site, but it's pretty frightening when you look at real information.

So, basically, I think Edison has successfully created a multibillion dollar nuclear waste storage boondoggle. It's happening at San

Onofre, it's happening at any other site where these canisters are being loaded. They cannot be inspected for cracks. Look at the granular structure of crack formation. You cannot repair it. I don't know how you guys got away with it convincing the Coastal Commission all of that, but I think people should be aware that the future of that waste is hot cell, should be repackaged, so they can inspect, repair, maintain, monitor.

There's no permanent repository. Take that off the board. (Inaudible) surface storage next foreseeable many generations. This stuff needs to be repackaged. Think about that. Thank you.

CHAIRMAN DAVID VICTOR: Thank you very much for your comments.

Next we're going to go to Nina Babiarz. I believe Nina's line is also Charles Langley, so we're going to go Nina's line but give the floor for a few minutes to Charles Langley and then give the floor to Nina Babiarz for a few minutes.

Sanjay, if you can open up to Nina Babiarz line. Her last four digits, according to the chat here, are 4611.

MR. GURAGAIN: Nina, if you can press

star 61, you will be unmuted.

CHAIRMAN DAVID VICTOR: Nina, can you push star 6?

Okay, there we are. Your line is open.

NINA BABIARZ: Okay.

CHAIRMAN DAVID VICTOR: Is it you or Charles? I don't know who's going first.

NINA BABIARZ: I'm going to hand the phone to Charles first.

CHARLES LANGLEY: Hi. This is Charles Langley. Can you hear me?

CHAIRMAN DAVID VICTOR: Loud and clear.

CHARLES LANGLEY: My question is to Southern California Edison during the July 16, 2020, Coastal Commission meeting, the commission stated that the permit may require moving the current ISFSI under the footprint of unit 1 or unit 2 due to rising sea levels or other factors. Have there been any new developments in this plan, specifically can Southern California Edison point the public to a specific document that outlines this plan with the Coastal Commission in detail?

I also have a separate question regarding Tom Palmisano and whether or not he's representing Edison as an employee or as a consultant? We

first heard he was terminated, then he reappeared presenting himself as a representative of Southern California Edison, and what I would like to know is does this mean he's an agent of Edison?

And finally, on the website it's not quite clear on the SONGS Community website whether public comments have to be submitted in writing, and if that could be clarified, we would appreciate it? And I will turn this over to Nina for her questions and comments.

CHAIRMAN DAVID VICTOR: Great. While the phone is being moved over to Nina, let me just say public comment although is remote but as it always has been, public comment can be made in this mode or they can be made in writing or they can be made in both, or by Tweet, maybe not by Tweet, I'm not sure, but any other formats is fine. We're trying to be as expansive as possible.

Nina Babiarz, the floor is yours. After you speak, we're going to give the floor to Allison Schlick. Nina Babiarz, the floor is yours.

NINA BABIARZ: Thank you, Dr. Victor.

Report was issued by the California State legislative analyst office this Monday warning of

intending hazards propagated by sea level rise exacerbated by severe storms, King tides, and El Nino events that would threaten two-thirds of California's coastline describing areas that would also include San Onofre.

The report also addresses how imperative it is for local and state lawmakers to begin to plan now most particularly to secure funds in order to deal with the predicted consequences. It even prompted California Coastal Commission Executive Director Jack Ainsworth to claim, quote, The key to meeting these deadlines is funding end quote, Ainsworth added, quote, there's going to be competition for that money across the United States. This is just the tip of the iceberg up and down this state with regard to rail lines. It's a huge, huge problem, unquote.

Considering that SONGS actually sits between the ocean and the rail line, what are Edison's plans to secure funds to move the ISFSI before 2035 if/when it may become necessary? Has Edison secured funds through the California Coastal Commission in anticipation of what no longer is a worst case scenario but a predicted one?

CHAIRMAN DAVID VICTOR: Okay. Thank you very much for your comment. Is there anything else you would like to say?

NINA BABIARZ: No, we're anxiously awaiting the answer.

CHAIRMAN DAVID VICTOR: We'll get to the answers in the next segment of our show here.

NINA BABIARZ: I did post two other questions that I'm assuming Dan Stetson or whoever normally addresses them at the end of the meeting will also pose.

CHAIRMAN DAVID VICTOR: We see those as well.

NINA BABIARZ: I could read those now?

CHAIRMAN DAVID VICTOR: Sure, why don't you read those right now.

NINA BABIARZ: Okay. On page 19 it indicates that, you know, while the NRC does not regulate inspections for 20 years, shouldn't they be that NRC regulation be updated to accommodate the scratches and gouges that we now know, of course the broken shims on the SONGS cans, that the SONGS cans have experienced?

And then my second question is relevant to page 29, specific to the MPC, slash, ISFSI

system inspection results that are supposed to be reported to the California Coastal Commission every five years after each set of inspections, unquote.

My question is when is the first inspection report date due to the Coastal Commission? And that would be, you know, month, date, year. What's the deadline for that first report? Thank you.

CHAIRMAN DAVID VICTOR: Okay. Excellent thank you very much for your comments and questions.

Next we're going to Allison --

NINA BABIARZ: Thank you, Dr. Victor.

CHAIRMAN DAVID VICTOR: Next we're going to Allison Schlick, and then after that I see some questions from Ray Lutz that mostly have to do with Skype, and I'm going to going to Ray after Allison and see if he wants to make a comment, but first we're going to go to Allison Schlick.

MR. GURAGAIN: Allison, please press star 6 to unmute.

CHAIRMAN DAVID VICTOR: Your phone is -- there we go. Allison, the floor is yours.

ALLISON SCHLICK: Hello. Thank you. I

had a few questions along, one was about the Clive, Utah facility if the -- it looks like it's already been constructed and everything, has the citing paid attention to or involved Native American historical concerns of what might be underneath and inaccessible after construction?

And number 2 would be about any -- my biggest question was about the reef, that haven't been asked already. I also concur with the questions and concerns of Charles Langley and Nina Babiarz and some of the others as well. I have some concerns about especially sea level rise, but I don't want to waste my time with restating Nina's questions, but I second her questions especially.

The reef project, I guess I'm kind of -- I would like -- I submitted this one in writing during the presentation as well, so maybe you can follow up with me. But what is the -- can you cover some basics in your answer to everybody's questions about what is it that's being reefed? Is this potentially radioactive material? What's -- I guess I don't understand that whole project piece. So thank you.

CHAIRMAN DAVID VICTOR: Okay. Thank you

very much. We'll go back to Jenny on that, not just yet. We're going to right now to Ray Lutz to see if, Ray, you had a question or comment that you wanted to make.

So, Sanjay, if we can open -- Ray, the floor is yours, if you like it.

RAY LUTZ: Hello, can you hear me?

CHAIRMAN DAVID VICTOR: Loud and clear.

RAY LUTZ: Had a little trouble getting online. I tried to use the Skype thing and kept me in a lobby for many minutes, and so I kind of missed having the video of the people speaking. All I can see is slides so that's kind of a drawback to this method. So that was my comment. I appreciate the presentations tonight. Thank you very much.

CHAIRMAN DAVID VICTOR: Thank you very much. Let me just take your comment first. I don't see any other comments or people who want the floor. Let me just ask Manuel Camargo if there's anybody else who wants the floor. I believe we covered everybody who requested the floor.

Manuel, is there anybody else?

MR. CAMARGO: No, not that I can see.

GEORGE ALLEN: Yes, is there request for additional comment?

CHAIRMAN DAVID VICTOR: Who is that?

GEORGE ALLEN: This is George Allen. I'm a San Clemente resident, and I've been listening to the presentation, but I'm a deplorable worker who has to dress out for protection for asbestos exposure, also I have to wear protective clothing for contamination exposure at San Onofre. I've been hearing people talk about things that are not quantifiable that are way out in the future, like Levin talks about a 25 to 35 trillion dollar cost for climate exposure. He also talks about a 50-mile radius that says there's a deadly contamination exposure 50 miles out, 5 million people, and I think that is a deplorable statement, because the radiation exposure is at the site boundary. How do you guys listen to a person Levin who exaggerates the risk of radiation exposure when the expert like Eric Goldin has stated it is less than 1 millirem per person at all these releases, it's not even -- it's not even measurable? How do you guys continue to listen to people that are exaggerating the risk beyond what is truth?

CHAIRMAN DAVID VICTOR: Okay. Thank you very much for your comment. I want to -- I think the comment period is --

MR. CAMARGO: David, I think there is a Debbie Kinsinger.

Have we heard from Debbie?

CHAIRMAN DAVID VICTOR: I don't think so. I don't see her on the Excel file. Debbie Kinsinger, let me see whether you -- Debbie Kinsinger, the floor is yours. Debbie, the floor is yours. You've been muted.

Sanjay, looks like Debbie's line is open; is that correct?

MR. GURAGAIN: Her line is open.

CHAIRMAN DAVID VICTOR: Debbie, can you hear us?

Let's come back to Debbie in a moment. I want to say two things: First, on the platform I take that as an action item, Ray. I think people who are operating through the Skype app are only seeing the main feed, and therefore, no video of the talking heads as well. Let's see if there's a way for us to pin the people to the feed as well as the slides. Seems like a very good point. Some of these are limitations on the different

platforms. I use Zoom when I'm teaching, which is fantastic, but people have a lot of concerns about security of Zoom. I think people who are running nuclear plants are understandably risk averse.

I wanted to comment on the question of why are we listening to so many voices. I think we have an obligation in a democracy to listen to all voices. We also have an obligation to look at facts and data and have discussions and so on. I really appreciate the intensity of the comments and also concerns about what's real and what's not real, and the voracity of the some of the claims have been made.

I appreciate those comments, but that's why this panel exists to have a very wide ranging reviews that reflect what the community is thinking about.

I want to go back to Debbie Kinsinger to see if you can hear us and if you would like to make a comment?

I can't hear you. So I'm going to go to Dan and to Martha to -- why don't we close the public comment period, let's go to Dan and Martha. If someone has put into comment -- put into the -- here we go, we have -- okay, so we have comments

from Debbie Kinsinger in the chat box. Debbie, we can't hear you. We can unmute your microphone and I believe we have unmuted your microphone. Is that true, Sanjay?

MR. GURAGAIN: That is true.

CHAIRMAN DAVID VICTOR: Debbie, can you hear us at all?

Okay. Let me suggest that, Debbie, if you could put your comments in the chat box, I make sure those get into the conversation. Okay. Excellent, thank you very much. Sorry. Maybe offline we can figure out what the problem is so we don't have this problem again.

I'm going to give the floor back now to Dan and Martha who will lead the conversation about the public comment period.

VICE CHAIRMAN STETSON: Martha, would like to go first?

MARTHA McNICHOLAS: Sure. There's a couple things that I heard a couple times that I don't know much about either. I'll start with the temperature monitoring at the outlet vents, and the different between the monitoring inlet or outlet, and have we made that information public? I guess that would be a Doug question.

DOUG BAUDER: I'm going to start to answer and then hand it off to Jerry Stephenson who I think is online on our engineering team.

So we do routine monitoring on the TN system. Typically we'll monitor the doors. It's a horizontal system and then the doors will provide a good data for us on the radiation readings of the system. There is no reason to think that there would be any sort of containment boundary issue with the canisters. So there's no real technical reason to monitor the outlet vents if there was a radiation leak. The leak would not follow the air pathway. It would be an x-ray style leak. It would follow -- it would go straight. It wouldn't go through a vent. If there was a canister integrity issue like that, we would detect it with normal readings.

I do want to hand it over to Jerry who I know is online and who will also take part in this answer.

Jerry, go ahead.

CHAIRMAN DAVID VICTOR: While you're going over there, can we de-share the screen so that we're not ghosts talking in the ether? Maybe, Lorraine, stop presenting and we'll be able

to see the video.

Excellent, thank you very much.

JERRY STEPHENSON: I can see you the whole time, David. Can you hear me?

CHAIRMAN DAVID VICTOR: Now I can hear you, yes.

JERRY STEPHENSON: We do routine monitoring of all of the ISFSI. There has been no elevated rates like was mentioned. There are -- they are -- some vary from location to location because every canister is not the same. There's different fuel loads and different batches in each one of them.

I know it's kind of intuitive to think that should there be a leak, it's going to quickly come out the outlet like smoke. Radiation isn't like smoke. Streaming radiation travels in a straight line. A plume of radiation like would come out of a vent stack in an operating plant accident, which is not what we have here, we do not have an operating plant, a plume of radiation we treat that like the wind.

In this case the tight crack that you would have from a postulated defect in a canister, which we're going to be inspecting and looking for

those, but suppose you do postulate a tight crack in a canister like everybody wants us to address, there's not going to be any radiation plume coming out that crack that -- to migrate out the outlet air vent. So, you know, there's no technical reason, no benefit to monitoring the outlet vents.

MARTHA McNICHOLAS: Thank you.

Dan.

VICE CHAIRMAN STETSON: Thank you. In fact, I remember walking and measuring the radiation with Gene Stone, and David, you were there for a while as we walked to measure the radiation out of each and every one of the Ureva canisters a couple years ago.

Anyway, I want to move on to Charles Langley. He had a couple questions and -- which he read, I'll read it back. My question is to Southern California Edison during July 16, 2020, Coastal Commission meeting the commission stated that the permit may require moving the current ISFSI onto the foot print of unit 1 or unit 2 due to rising sea level or other factors. Have there been any new developments in this plan? Also, can Southern California Edison point the public to a specific public document that outlines this plan

with the Coastal Commission in detail and his other question is -- relates to Tom Palmisano, is currently an employee or acting as an consultant?

DOUG BAUDER: Dan, I appreciate the two questions. Let me answer one at a time. First I'll work my way backwards. Tom Palmisano is a consultant for Edison. He was a consultant for us when he presented to the Coastal Commission, very knowledgeable. He understands our systems here and has helped us out in that regard.

In looking at the online question from Charles, Tom was not fired. Tom retired from the company and he's doing consulting work, not just for us, but other companies as well.

Regarding the sea level rise situation and the 2015 Coastal Development Report for the Holtec system, in that report which was approved October 6th of 2015 and extends through October 6 of 2035, Edison, we are required no later than six months prior to the end of that period, that would be October 6th of 2035, to submit in our application our estimate of coastal hazards that would extend through 2051.

As part of our permitting process for the coastal development permit for the site

decommissioning work, we also look at coastal sea level rise, and as to the California State Lands Commission made a commitment to monitor sea level rise and submit reports annually, which we are doing.

We also did studies on potential sea level rise and looked out through 2035 and beyond on to 2051, and we have a worst case bounding analysis called H++ that we are willing to share at a future meeting that would be bounding analysis and would keep in safe conditions through 2035 and potentially beyond 2035, we would need to recess.

So that report that we do at sea level monitoring, which we check quarterly is submitted annually to the California State Lands Commission. We're on the front end of it obviously since our Lands Commission permit was approved in March of last year so we're still working through that.

We have no reason to think right now that sea level rise will challenge the Holtec system in any way to address any challenge to its safety. However, as part of the 2015 Coastal Development permit, which we have a link to on our songscommunity.com website, you can feel free to

look at that and note that as part of the permit, we are required to allocate a higher elevation site on SONGS' current easement property to relocate the fuel, if needed, if we do see that I divergence in sea level rise between 2035 and 2051. And, in fact, when we decommission units 2 and 3 to a level grade roughly at 30 feet elevation, we will have a higher level ground position to relocate the fuel if we would need to do that. That's actually part of the Coastal Development permit or approval that was obtained back in October of 2015.

I know it may seem complicated as you tie things together, if you need more information than that, you can send us a note or we can provide the detail on how the permit structure lays out at the next meeting.

CHAIRMAN DAVID VICTOR: I think -- if I can jump in on this, I think whenever the time is right, we got a lot of stuff on our agenda in the near future, but at some reasonable time, it would be good idea to look at what H++ means, because that's a lot of sea level rise in H++. It doesn't show up in the next 15 years, 20 years, but it's an exponential growth, but that's a whole lot of

sea level rise and very significant implications in the out years. Back to you.

MARTHA McNICHOLAS: Can I just confirm on that, so as part of the California Lands Commission permit, you do have to look at moving the canisters to a higher location in anticipation of sea level rise, but there's no specific plan at this point, is that an accurate assessment?

DOUG BAUDER: I would say so, maybe it's a little convoluted how the permitting is tied together. As part of the 2015 Coastal Development permit for the Holtec system, we committed to reviewing sea level rise as it may affect the location of the Holtec storage system by 2035 so that when we would resubmit for a permit renewal in 2035, we would look beyond 2035 to 2051 and be assured we have levels of safety for or against sea level rise.

As David mentioned, the H++ study does diverge beyond 2035. We'll be more educated about sea level rise as we approach the permit reapplication period, because we'll have all the data between now and then. And every quarter we're checking our sea level conditions and then submitting that annual report to State Lands

The requirement to do the monitoring and submit the reporting to California State Lands was for the decommissioning equipment environmental impact report and that approval was obtained in March of last year. The two are tied together in that way. We don't have any plans right now to relocate the system on site, but I will tell you if we're educated through the sea level conditions as we go over through the next decade, that would cause us to reassess potentially and look at that as an option, which once again, leans toward making sure we achieved decommissioning the site to a level grade in units 2 and 3 which is at a higher elevation in case we do need that option, we would have it ready.

MARTHA MCNICHOLAS: Personally, if we are going to move it, I would rather move it a lot farther away like, you know, Texas but thank you.

DOUG BAUDER: Yeah, me too.

MARTHA MCNICHOLAS: Okay, okay. I guess my turn again, one of the questions a couple things focused on the metallic overlay process, which I'm very fascinated myself, and the question was has this process been approved by the NRC and, if not, does -- do we plan to seek that approval?

And I'm not sure that would be you, Doug, or maybe Randall?

DOUG BAUDER: So I'll start this and maybe ask Randall to fill in around the edges on it. So we know it's a solid process. It's been used by the military, and Randall discussed through that. We -- regarding the NRC, the NRC witnessed our in-situ testing here at the site in our test canister environment, so they're very comfortable with our ability to perform it.

If we were required to use it, if we inspected a canister and found a defect that we decided to apply the overlay to, we would do it and then we would write what's called a 72.48 evaluation under the part 72 license and evaluate the safety of that repair that we would have needed to do. The NRC would then inspect that 72.48 process to ensure that it met all the requirements and rigor needed for the actual repair.

What Randall was referring to was not the NRC process, per se, but more the ASME code process, which can take years to work through because the ASME code committee reviews things carefully and methodically.

So I don't know, Randall, if you have any more to information to add beyond what I said, please fill in.

RANDALL GRANAAS: So what Doug said is all accurate. And what we would like to see the NRC typically because ASME is so thorough, once ASME approves a process, they'll issue a reg guide endorsing that ASME code case, and that would be our goal is for when they finish endorse cold spray, and the NRC will turn around and say -- the NRC will probably participate in this process as well. They get involved in the ASME code case with the task group.

So that would be our goal would be the NRC to endorse after the ASME code case is approved.

MARTHA MCNICHOLAS: Okay. Dan?

VICE CHAIRMAN STETSON: Okay. Thank you. I would like to go back to Donna's question and just to make sure that we understand when Jean, David and I were measuring the radiation we weren't doing it either of the vents. As you know, there's a vent, there's a base, and then there's the main door itself and then there's the exit vent way up high, so we were measuring

through the door itself.

So the question that Donna was asking is, have you actually seen and evaluated the DOE Sandia gap report, and do you have any input based on that report?

DOUG BAUDER: Actually, I'm going to let Randall address that one. I will say we do routine surveys, some up on top and some at the door so we know there's no radiation issue with the horizontal storage system.

Randall, go ahead.

RANDALL GRANAAS: I'm not sure if I understand the question completely, so I'll follow up a moment.

But I will say I was just up on the roof in January, and you lean right over and you look at the exhaust vents and of course the dose rates up there are normal, right, they're the same as anywhere else on the module.

And I think the other question was whether or not we monitored the gap report, absolutely. That's why we were in the extended storage collaboration program with EPRI and we engage in all the industry meetings, and we're aware of that gap report.

The thing about the CISCC being moved to the number 1, and we talked about this at the last meeting, it's not because all of a sudden there was new research saying that the chloride induced stress corrosion cracking was much worse than ever thought, nothing has changed. The thing is they have to do these tests, and these tests that they do for corrosion take a long time, and once that occurred to them, they said, well, we got to start now, and they moved it to number 1.

Again, it's not because there's a reason to think that it's progressing faster than they thought or more prevalent, because we still haven't identified it. Hopefully that answers the question.

VICE CHAIRMAN STETSON: Back to you, Martha.

MARTHA MCNICHOLAS: Okay. I think that questions about -- well, we'll start with the one from Allison about the Clive, Utah facility and whether it's licensed or not or was there concern for Native American historical or archeological sites that might have been interrupted?

And I know, David, you have been there, my understanding it was licensed and operating,

and it has been operating for a while, so can you confirm that for Allison and anyone else who might be concerned.

CHAIRMAN DAVID VICTOR: Yes, it's been operating for decades under two owners. The current owner bought it 15, 20 years ago, I can't remember exactly, and operates it now as nuclear waste site. It was previously was RCRA site, so a super fund site. It's actually an industrial area. Clive, Utah is out -- I won't say in the middle of nowhere because if you're in Clive, you're somewhere, but there's an incinerator there. It's a former lake bed of Lake Bonneville a long time ago.

I don't know about the citing process concerning Native American artifacts, but I can ask them.

MARTHA McNICHOLAS: Okay, so it's nothing new, and we're not the first ones there?

CHAIRMAN DAVID VICTOR: No, we're very much not the first ones there. So in addition to the RCRA sites, there's one or two mounds that are RCRA materials. Zion, which is a plant in north of Chicago has been sending all of their -- Zion is essentially decommissioned now, not

essentially, all of their material has gone to Zion, could have gone to Clive. It's been used extensively, and we very much not the first in line.

MARTHA McNICHOLAS: Can I ask another one? Is Jenny still on the line, or did she have to leave?

CHAIRMAN DAVID VICTOR: She's still here.

MARTHA McNICHOLAS: Okay, because that was another question maybe about describing the reef and the reason for the reef and the concern that there might be radiological material in the reef, and I think Jenny did a real good job of explaining the reason for it in the first place. Maybe she can give another recap of that, because I think there was people that didn't understand that.

CHAIRMAN DAVID VICTOR: Tell us what you're growing there.

Jenny McGEE: So essentially the reef program is compensation project and it's compensation for the environment impacts to a kelp -- to kelp reef during operation of SONGS. Kelp is essentially seaweed. And so what the reef consists of is the same quarry rock that you see

used to construct harbors, like Dana Point Harbor, you see those little along jetties that's go out, big rocks that are piled together. It's the same rock, and essentially the rock is laid on the ocean floor and the kelp attaches to the rock and grows amazingly fast and creates a forest like habitat for fish.

It's kind of like if somebody spilled coffee on your shirt, and then they replaced it by buying you three or four new shirts. Kind of a similar analogy.

MARTHA McNICHOLAS: I like analogies. Thank you. Thanks, Jenny.

Dan, back to you.

VICE CHAIRMAN STETSON: Okay. Thank you. There's a question from Steve Rogers, and it is a how do you actually detect the leak, if we have the canisters in the ISFSI and one of them develops a leak, how are you actually going to determine that one of them is leaking?

DOUG BAUDER: So I'll start this one again, this is Doug, and then I'll hand it off potentially to Jerry or even Randall. First of all, the propagation of a leak would be very slow, and we know that through years and data already on

stored canisters. And what we do or what we're doing is an inspection and maintenance program for the Holtec system, and we'll be inspecting the TM system, the Areva system as well where we actually will be able to robotically do some surface inspections in those canisters.

We would see some sort of a surface defect before a leak would go through wall on a canister. If a leak did go through wall and we didn't know it, essentially, you could postulate that over a long period of time the helium would leak out, that's what would happen. There wouldn't be much else that would occur with the canister. The fuel was stored in symmetrical fuel rods. It's uranium off site pallets, which could withstand super high temperatures, but that's effectively what would happen.

The helium itself that would potentially leak out would not be radioactive. We know that because when we do the canister preparations, the seal welding and the evacuation and the helium dry, we actually check the filters that the helium passes through during the drying process, and we get essentially no radioactive readings, so we know that's a clean environment of helium in the

canister.

With that, I'll turn it over to I think Randall to address maybe a little more technical detail.

RANDALL GRANAAS: Let's see what else I can add here. So as Doug said, when he inspect the canister, we're looking for precursors, whether it's a rust stains or pitting, and we would identify the crack before it becomes too significant. If it did leak out, as Doug suggests, the helium might come out, but with a microscopic cracking like this, any material coming out is very unlikely for a little crack like this. I say little crack, I should say small, microscopic crack.

And I don't think there's anything else I want to add.

DOUG BAUDER: I appreciate it, Randall.

VICE CHAIRMAN STETSON: Okay, thank you.

Go ahead, Martha.

MARTHA McNICHOLAS: Okay. One of the questions I think this is Nina that asked, if we were required to send out inspection reports to the Coastal Commission, when would the first report be due to the Coastal Commission?

DOUG BAUDER: This is Doug again, I'll take that. First a little bit of history, in 2019 we inspected eight of the Holtec canisters. That data was supplied to the Nuclear Regulatory Commission and used as part of our inspection and maintenance process, that was approved recently on July 16th.

In 2022 we inspected the test canisters, Randall covered, that test canister gets inspected every two and a half year, and in 2024 we will inspect a test canister and to multipurpose canisters on the Holtec system. I believe the reporting requirement is every five years to the Coastal Commission as part of the inspection and maintenance program, and Randall tells me that that report is required to me submitted 180 days from when our inspection is complete for each interval.

MARTHA McNICHOLAS: One of them has already been submitted?

DOUG BAUDER: What we submitted is the inspection and maintenance plan --

MARTHA McNICHOLAS: Oh, okay.

DOUG BAUDER: -- right at the end of March and that plan was reviewed by the Coastal

Commission's third party expert engineering firm. Some comments were resolved, a few recommendations were made to improve the program, and then, of course, it was approved by the Commission itself on July 16th.

MARTHA McNICHOLAS: Thank you.

VICE CHAIRMAN STETSON: Thank you. Just following up on the question so, again, from Kaleen should there be a helium release, you're saying the release of helium, which you're saying which we know is an inert gas would not be a problem or dangerous; is that accurate?

DOUG BAUDER: That's accurate.

Vice CHAIRMAN STETSON: Okay. Thank you. I want to go to question from Nina again, and this relates to the question if it's necessary to move the ISFSI, what is Southern California Edison done to secure funds if that's move is necessary?

DOUG BAUDER: Okay. So it might be a multipart answer here, first of all, we wouldn't go -- I think what was mentioned was going to the Coastal Commission for funding, that would not be the case. The Coastal Commission would regulate our activities appropriately if we did need to move the -- I'll say to move the Holtec system to

a different position on the site.

If we had to do that, we would do that out of consideration for safety, and I can tell you little else would matter. We have a pretty robust decommissioning fund. We have a car route in that fund for handling and storing our nuclear fuel. It's known and we're one of the sites that participated in this as well, that we seek relief from the Department of Energy for storing and maintaining our fuel and many other sites around the country do that as well just like us, and so we continue to do that, because the Department of Energy has not met its obligation under the Waste Policy Act to start moving fuel by 1998, and here we are 22 years later.

If we had to move the fuel on San Onofre property, we would do it out of consideration for safety, and that would be the first priority. After that, we would very likely fund it out of existing funds we have in the decommissioning fund for fuel, and then we might potentially seek relief for that movement and for that additional structures and systems and personnel needed to safely monitor the fuel, just like we're doing right now in the dry fuel system.

But we would not seek relief from the Coastal Commission for funds. That would not be required.

VICE CHAIRMAN STETSON: Got it. Okay, thank you.

Martha?

MARTHA McNICHOLAS: I'm trying to understand the question that Debbie Kinsinger submitted in the chat room so I'll read it: "Why did the EA for decommissioning the plant not take into consideration the removal, storage, and transport of the spent fuel? Potential significant effects should have been evaluated."

And I guess I don't know what EA means.

CHAIRMAN DAVID VICTOR: That's the environmental assessment.

MARTHA McNICHOLAS: Okay. So I'm not sure -- like I said, I'm not sure I understand that.

DOUG BAUDER: Let me at least take a try at it. The environmental assessment was part of the environment impact report and was submitted initially to the California State Lands Commission and then ultimately approved by the Coastal Commission. As part of that overall structure, we

did not include the fuel or the fuel storage because that falls under NRC rules and regulations for us and all the rest of the nuclear plants, and although we can say it falls under federal preemption, we do make the commissions aware of what we're planning to do with the fuel and aware of how the decommissioning efforts will not affect the safe storage of the fuel, and so we received questions around fuel storage and fuel transport, and I will tell you the Coastal Commission is very keen on our ability to be able to transport the fuel in the future, which is absolutely a necessity and actually very much integrated with our strategic plan to make sure we're ready when the DOE can transport or there's some other interim solution, we can transport it.

That's where you see the Coastal Commission very involved in the state of the fuel being ready for transport, because obviously it's here on the coast, and we want to get it safely shipped.

MARTHA McNICHOLAS: I understand the question now, because the environmental assessment was just for decommissioning as a -- I did look at it as a dismantlement of the structure and not the

part of the spent fuel storage. I understand the question now, and thank you for the answer.

RANDALL GRANAAS: This is Randall, and I can add a piece of information to it too. The NRC does their own environmental impact reviews for all their actions, licensing actions, so it's a separate process.

MARTHA McNICHOLAS: And I think that's all the key questions I had, unless, Dan, you caught some other ones?

VICE CHAIRMAN STETSON: I see two more than I'm happy to address, one has to do with, Doug, maybe you can help us, from Nina again, which agency approved the permit as we reference to the releases, NRC or San Diego Regional Water Quality Control Board, who actually oversees the discharges?

DOUG BAUDER: Once again, a two-part answer. The Nuclear Regulatory Commission regulates and oversees through inspections the radiological components of our discharge. We also have a National Pollutant Elimination System Discharge permit from the San Diego Regional Water Quality Control Board, and that's a mouthful, that permit is an overarching structure that has to do

with all types of releases we make from the plant, whether it's a rain water that collects in a sump and then we discharge that rain water after sampling, or whatever the case may be.

So think about it as Nuclear Regulatory Commission oversees any regulatory aspects ensuring that the discharges are safe from a radiological perspective and the NPESD permit envelopes everything else.

VICE CHAIRMAN STETSON: Okay, thank you. And one final question, it has to do with AECOM possibly withdrawing from the decommissioning project in San Onofre, what's the status of that, and is another company going to be taking over their contract?

DOUG BAUDER: Yeah, so I'm not at liberty to discuss any contractual changes that may be occurring with Songs Decommissioning Solutions, the joint venture company at San Onofre. I will tell you if a change were to occur, if AECOM were to move out of the project, we would ensure that through our reasonable control over the contract requirements that the resulting entity was solid financially and will continue to carry out safe decommissioning of the station.

And if such a structural change were to occur, at the next appropriate meeting, I will be happy to brief the group here and answer any questions you may have.

VICE CHAIRMAN STETSON: Thank you, Doug.

David, I think that does it.

CHAIRMAN DAVID VICTOR: Thank you very much, Dan. If I can just press on one issue, two issues very quickly; one, we did have a question from Nina about whether the NRC needs to update its inspection requirements concerning the canisters that have been scratched, it's my understanding that the HD video shot of all those canisters was shared with the NRC, the analysis at least was shared with the NRC, and the NRC has not opined that they want to change the inspection protocol.

Is that correct, Doug, or is there some additional answer to Nina's question that we need?

DOUG BAUDER: In short, David, I think what you said is correct as part of our fuel transfer operations restart I'll say, last year in July, prior to that the NRC did extensive inspections on our robotic camera inspections and observed, for the most part in the field, reviewed

all the data and did their own supporting calculations on our analysis.

So the NRC is not indicated that they would want to observe any more inspections or change of frequencies or requirements or maintenance inspection program. I would anticipate that when we enter various phases of the inspection and maintenance program of the Holtec system, the NRC will witness some of those inspections that we make, as they inspect many other things that we do.

CHAIRMAN DAVID VICTOR: If this were any other plant the issue would arise after 20 years when they had to reliance the canister system for the ISFSI, and there have been no inspections done and instead you would have done all these interim inspections, so thank you.

One other I want to press this is for Randall, I think, so you were on the roof in January of the transnuclear TN system, and you have a bunch of data saying the measurements there are normal. I'm hearing some people, Donna, Kaleen, others asking why we can't see those data. I completely understand the physical logic, the physics logic here which is the concern is

radiation, the line of sight phenomenon not carried in the air vents, so there's kind of a disconnect there over the laws of physics. But are the data from the roof and the exhaust vents there and kind of available and easily, you know, released, or is this one of those questions where hasn't been done with certain kind of calibrations and you don't want to release it? Help us understand what's going on here. It seems like a tempest that doesn't need to be a tempest.

RANDALL GRANAAS: Doug, this is where you want to speak, but we could get some readings, we can do it any time we want, we can have someone come out there and film it, and we can provide them. I'm speaking for Doug, so I got to be careful, right. There's nothing to hide. It's going to be normal just like we did recently we did for the UMax systems where we took out a meter and bring your own, right?

CHAIRMAN DAVID VICTOR: Can I say before Dan says we were out there, yes, we were out there, first of all, I didn't bring a ladder, Gene was with us, I did build a Geiger counter for the purpose of it, which had readings that were normal, although I will say the GPS on the Geiger

counter seemed a little bit inaccurate since it believed we were out swimming with the sharks the entire time and not actually on land. So I hope you have a more accurate system than the one we had.

Doug, help us understand what to do about this issue.

DOUG BAUDER: I think, David, the thing to do here is, and I appreciate what Randall said, is just go measure the outlet vents, film it, bring a third party expert in to witness it, and it's done. There's no physical reason to think there's an issue. There hasn't been an issue in the past and, essentially, it seems -- I agree with you. It seems like we're making a big deal and we don't need to be. And there's absolutely nothing to hide here.

And so it seems like just go do. And think we'll go do it, and we'll publish the information to the website, and if we want to discuss it at the next meeting, we can do that as well.

CHAIRMAN DAVID VICTOR: I don't want to create an extra expense and drama here, and I don't understand the laws of physics that create a

concern here, but let's get the data and then if folks continue to not believe that, let's have somebody explain to us who doesn't believe the analysis what laws of physics leads you to think that the world is operating, you know, spinning the opposite direction or whatever is going on that leads you to think that's inappropriate. That would be helpful.

I want to just say that if anyone thinks that any of the answers tonight were not -- this is the first time in a long time that I think we answered all the questions raised, and then some in the questions submitted in advance and online, if anyone believes answers have not been responsive and complete, let us know so we get more complete and responsive answers.

I have had a lot of questions come in on technology questions, and I'm not the IT department, but I will connect you to the IT department to help figure out the technical issues, which is a work in progress.

I want to pause just for a moment and see, before we go to close here, if any of the members of the CEP would like the floor to make any additional comments or raise questions

tonight.

I'm not seeing anybody opening their mic. So I want to ask first Dan and Martha -- oh, Paul Wyatt, the floor is yours.

PAUL WYATT: Just briefly, and this is sort of a follow-up to Council Member Kathy Ward's comments from San Clemente too, to get data out there I think the cities along the coast, Dana point, San Clemente and others, can link to the some of the reports tonight. One of my express concerns all along is to get this data where people who are concerned can find the real science backed data to read, as opposed to looking at signs that are put on the beach or social media.

I think we got a couple of good reports on the reef and on the discharge the -- the discharge that we can link to our city sites. I would encourage all the members, all the coastal cities along here to link to those and have it placed on their city websites and others where this data can be easily referenced, and we can get that it out to our community. I appreciate the reports we got tonight and the usefulness.

MARTHA McNICHOLAS: I'm going to tag onto that and say both Eric's presentation and Jenny's

if those could be extracted from the PowerPoint and posted separately as reef and discharge both for cities and SONGS Community, I think that might be easier for the public to get through than trying to filter through the agenda to find it.

CHAIRMAN DAVID VICTOR: I think that's a very astute comment, both the comments from Paul and Martha, because we have a huge amount of material now, this is unlike 2014. This is a massive amount of information, and actually the information is getting harder to access because there's so much of it. This topic of the discharge is getting a lot of attention and will continue, ditto on the reef. We should pull out the topic pages.

I want to see if there are any other comments that the members of the CEP want to make. I don't see any others, so I want to give the floor first to Doug, and then I'll say a couple words at the end.

Doug, the floor is yours.

DOUG BAUDER: Okay. Thanks, David. Look, as a representative for Edison here, we appreciate the opportunity. We always want to feel accountable to the CEP to answer questions

that you may have and to feel accountable to the community. I really want to appreciate the SONGS presenters tonight. All of you, Jenny in particular and Dr. Goldin regarding the batch releases, this has been very helpful I think for the CEP and for me and hopefully for the communities as well. Once again, it's that accountability. We do want to feel accountable.

I do want to mention it seems that, again maybe for a CEP meeting the questions start flowing in through our SONGS Nucom website, the community website, I want mention that if you got questions, technical questions, other questions around issues, we have a hotline, we have the link to the website, you can submit those any time, and will be as responsive as we can to answer them.

We have not been able to hold public tours since the start of the pandemic. We're hoping one day to change that. And that in past has been a mechanism for us to give information to people, take people around and show them what we're about here. We want to be responsive. That's the message that I have, and I hope to continue to did that.

And I'm looking forward to the fourth

quarter meeting. We can talk in some more detail about the strategic plan and a little more detail about the actual decommissioning work. Thanks, Dave.

CHAIRMAN DAVID VICTOR: Excellent. Thank you, Doug. I want to echo your thanks to the Edison team for the presentations. These are enormously informative. These are topics that a lot of people are concerned about. And I think accountability to the CEP is not quite right, it's accountability to the communities, and we're trying as the CEP to organize community thought and questions and listen to a wide range of voices and help get responsive answers, and I appreciate what you've done tonight.

I want to say that you had a big milestone this summer in finishing the fuel transfers and emptying the spent fuel pools, filling up the ISFSI, at least with spent fuel, there will be a few more canisters with components from the reactors.

The strategic of the game shifts now, and the meeting that we're having in the fourth quarter is really, really important. It's the next frontier, and we've got to figure out how to

organize ourselves to move the spent fuel and strategically what we need to do, what's important, what's not important, how to adjust our strategy over time, and I really look forward to that discussion. It's not going to be easy. We really need to think about who else we need in the room, if not in the fourth quarter meeting, in other meetings, so we can engage with people who actually have the capacity to change things including in Washington, insofar as changing anything in Washington is possible these days.

So I really appreciate everyone spending time with us this evening, and I look forward to seeing you in the fourth quarter, and please do keep any questions coming as you think of them, and I certainly will commit, and I know the rest of the CEP leadership and membership commits to being as responsive as possible as this unfolds. Thank you and be safe.

(WHEREUPON THE PROCEEDINGS WAS ADJOURNED AT 8:40 P.M.)

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

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 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.

I further certify that I am neither financially interested in the action nor a relative of employee of any attorney of any of the parties.

IN WITNESS WHEREOF, I have this date subscribed my name
this 9th day of September, 2020.

Certificate Number 12983

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