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Community Engagement Panel Public Meeting

Transcript of Proceedings

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SAN ONOFRE DECOMMISSIONING

COMMUNITY ENGAGEMENT PANEL MEETING

STATE OF CALIFORNIA, COUNTY OF ORANGE

TRANSCRIPT OF PROCEEDINGS

LAGUNA HILLS, CALIFORNIA

THURSDAY, MAY 22, 2014

REPORTED BY:
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SAN ONOFRE DECOMMISSIONING

COMMUNITY ENGAGEMENT PANEL MEETING

STATE OF CALIFORNIA, COUNTY OF ORANGE

Transcript of proceedings, taken at 25205 La Paz Road, Laguna Hills, California 92653, commencing at the hour of 6:07 p.m., Thursday, May 22, 2014, before BROOKE M. GALLAUGHER, CSR No. 13360.

PANEL APPEARANCES:

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CHAIRMAN

CEP MEMBERS:

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AMERICAN NUCLEAR SOCIETY, SAN DIEGO CHAPTER

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CAPISTRANO UNIFIED SCHOOL DISTRICT BOARD OF TRUSTEES

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LABORERS INTERNATIONAL UNION OF NORTH AMERICA LOCAL 89

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OCEANSIDE CITY COUNCIL MEMBER

GARRY BROWN
ORANGE COUNTY COASTKEEPER

(Continued.)

APPEARANCES CONTINUED:

GENE STONE
RESIDENTS ORGANIZED FOR A SAFE ENVIRONMENT

MAYOR TIM BROWN
SAN CLEMENTE

SUPERVISOR BILL HORN
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LARRY KRAMER
ALTERNATE FOR MAYOR SAM ALLEVATO

JIM LEACH
SOUTH ORANGE COUNTY ECONOMIC COALITION

DR. WILLIAM PARKER
UNIVERSITY OF CALIFORNIA, IRVINE

ALSO FROM SOUTHERN CALIFORNIA EDISON:

TOM PALMISANO

CHRIS THOMPSON

THURSDAY, MAY 22, 2014, LAGUNA HILLS, CALIFORNIA

6:07 P.M.

* * *

CHAIRMAN VICTOR: Thank you all for joining us this evening and thank you to Laguna Hills for hosting us tonight. It's terrific to see many faces we've seen before and new faces as well. And welcome to the second meeting of the Community Engagement Panel related to the decommissioning of the San Onofre Nuclear Generating Station. My name is David Victor. I'm chairman of this panel. In a moment I'll introduce the vice chairman and the secretary of the panel.

Let me just remind you that the exits are marked "exits." The restrooms are out there. If you are interested in making a comment during the public comment period which is scheduled for an hour starting at 7:45 tonight, please put your name on the list that you would have seen as you came in. If you're not on the list, you could still comment. But if you're on the list, you'll be earlier in line. And based on the last meeting, we had certainly a lot of community interest and a lot of comments. And I look forward to that segment of our meeting, in particular.

As our custom we have several officers from Orange County Sheriff's Department here with us tonight just to

help with security for everyone's own benefits. We will as our custom make a -- in fact, we're live streaming right now. We'll make that video available on the website.

And in addition to that we will have a full transcript of this evening's discussions. For the benefit of the court reporter who is making the transcript, I would be grateful if you would identify yourself when you take the floor, so that she could keep our records straight.

We keep reorganizing the order where everybody is sitting. Tonight it is, I think, alphabetical by last name from left to right. And so we'll keep mixing it up and everyone will have a chance to sit next to somebody different each time hopefully. We have tonight -- I want to welcome, Larry Kramer, who is the official alternate for Mayor Sam Allevato.

I also want to welcome Ted Quinn who is joining us and has been on the panel. And, Ted, it's delightful to have you here with us tonight. I believe the panel is full tonight, everybody or every seat is occupied and that's a terrific sign of the interest in this process and I think the good work that we've done.

I would like to, first of all, introduce Tim Brown, the mayor of San Clemente who is now vice

chairman. He will be serving as vice chairman of the Community Engagement Panel and Dan Stetson from the Ocean Institute who will serve as secretary. Tim and I will share the process and keep us on track strategically and hopefully responsive to the community's interests.

Dan Stetson is going to play the central role in making sure that the major topics that are identified at each of our meetings that they are -- that we keep track of those and that we do a good job of responding to topics the community would like us to pay attention to.

At our next meeting of the Community Engagement Panel, Dan will also lead a discussion of what we've talked about so far, issues that we've resolved, things that remain open and to help us focus strategically on how we spend our time going -- going forward.

Before we begin the formal part of tonight's meeting, I would like to see if there are any items that people would like to discuss in particular as related to the May 6th workshop that we had on nuclear fuel disposal and management.

We had a terrific workshop. Again, the materials from that are on the website along with the full video from that meeting. Several items came up during that workshop that I know Tom Palmisano from Edison would

like to brief us on, so maybe I will give the floor to you, Tom, first to cover some of the items that came out of that meeting and areas where we have responses already.

Then I would like to go to several of the members of the panel who I know would like to make comments on that workshop and see if anyone else from the panel would like to make comments on that before we get to the main part of the meeting.

Tom Palmisano.

MR. PALMISANO: Thank you. Several items that we took from the last meeting. One was the question of the size of the independent spent fuel installation pad. So I just wanted to come back with the specific data. The current pad is 313 feet by 175 feet, approximately 55,000 square feet.

As we've talked about adding in total approximately 100 additional dry fuel storage casks, we've generally talked conceptually about tripling the size of the pad. So we've got more specific dimensions depending on exactly which direction we would expand the pad in.

It would expand to approximately either 313 by 355 or 440 by 212 feet. Basically it will wind up being about a 94,000 to 100,000 square foot pad. So we'll

about double in area. I have a slide later in the presentation which will show this much more clearly. So that was one of the items that we wanted to talk about.

Another question we took away implications if we went with a 24 assembly canister as opposed to a 32 assembly canister and we'll talk some more about this during the presentation. Basically it would mean more canisters.

The 32 assembly canister obviously holds more fuel assemblies, but it doesn't double the -- it's not a linear change in the amount of space. So if we were to go with a 30 canister assembly -- I'm sorry. A 32 canister assembly we're in the vicinity of the 94,000 square foot.

If we were going to go to a 24 canister assembly, we would be about 102,000 square foot, so the effect on the pad size there. We have not completed cost estimating, so the actual estimates of the cost difference, we haven't run those numbers yet, and we'll be developing those numbers down the road as we do the Decommissioning Cost Estimate.

A related question came up about canning the fuel, and I'll talk a little more about that later. But we had a question about if we can fuel assemblies. As we heard I think in the workshop from the AREVA presenter,

there's not necessarily a safety benefit to canning fuel -- canning fuel assemblies that don't need to be canned.

If we were to can all fuel assemblies to be off-loaded, it's about a $30 million increase. If we were to can the high burnup assemblies, it would be about a $15 million increase. So those are some of the preliminary numbers we have based on the questions of the panel.

The -- I think the last question I have was what fuel handling equipment would remain at the ISFSI after decommissioning is complete. If you remember when we're done with decommissioning in 20 years or so when the plant itself is removed, the NRC license is reduced to just the ISFSI, we'll have just the ISFSI assembly.

We haven't made any final decisions yet currently. We would not anticipate keeping handling equipment on site. We would have handling equipment readily available through a vendor with a contract in the event we needed to remove a sealed canister from the concrete module.

And that's typically how we would do that as opposed to keep equipment that would be unused for years. We would have a vendor who would maintain and use the equipment and bring a vendor in to provide that

on short notice, so that would be the approach we would take.

Again, not a final decision at this point. But that would be a current plan.

David, I think those are the items that I have.

CHAIRMAN VICTOR: Great. Thank you very much, Tom. Let me now give the floor to Bill Parker. You may recall that at our first meeting of the Community Engagement Panel that some issues arose about seismic integrity of the casks in particular.

And we were asked to do some calculations to look at seismic integrity of the casks. And we also obtained some data about that at the May 6th workshop. I've asked Bill Parker to do some numbers and put that into terms that we non-seismologists understand like the Richter Scale and so on. And, Bill, you've done terrific work for us on that.

Can you give us a brief summary of what you've learned and then I'm going to circulate to the panel and also post on the website the more detailed analysis that you and I have exchanged by e-mail, Bill.

MR. PARKER: The Richter Scale is a measure of the total energy released during an earthquake and is not a particularly useful number to use in the design of any structure. What's relevant for the design of the

structure is the ground movement.

The further you are away from an earthquake obviously the smaller the ground movement. So the design criteria of all structures including a nuclear facility is in terms of ground acceleration. The acceleration is normally measured as a percentage of the acceleration due to gravity. So, Tom, you'll correct me but the generating facility of the reactor is designed for .67G?

MR. PALMISANO: That is correct.

MR. PARKER: And the dry cask storage will be designed for 1.5G?

MR. PALMISANO: Yes. In fact, that's the current design of the current storage installation.

MR. PARKER: What do those numbers mean? What does .67 or 1.5G ground acceleration mean? I took a look at the large earthquake off the coast of Japan back in 2011, the earthquake that created the tsunami that took out -- ultimately caused the problems at Fukushima. The Fukushima reactors are 99 or 100 miles away from the epicenter of that large Japanese earthquake.

There's actually another nuclear facility which most of us haven't heard about because no damage occurred which is closer. There is a set of reactors at the location if I get the -- Onagawa, which is only

55 miles away from the epicenter of that large Japanese earthquake.

For comparison, the distance from the San Andreas Fault to San Onofre is approximately 55 miles. So the Onagawa reactors in Japan are a much better comparison to SONGS. The Japanese earthquake was magnitude 9. That was the largest earthquake recorded in Japan and the fifth largest recorded anywhere in the world in the last century.

The largest in California are typically 8 on the Richter Scale. So the earthquake in Japan was one unit on the Richter Scale which is 30 times the amount of energy released as anything seen in California. The Onagawa site experienced .6 ground acceleration. The maximum that they saw.

The design criteria at Onagawa was approximately .5. So the ground acceleration slightly exceeded the design criteria. Nevertheless, there was no structural damage at the Onagawa reactor. The estimate for the most intense earthquake on the San Andreas is about 8.1. That's 30 times less than the energy in Japan.

So the comparison to Onagawa, I think, is a good comparison to the maximum earthquake you could imagine in Southern California at that earthquake in Onagawa exceeded by a factor of 30 in the amount of energy that

you would experience in California.

The design criteria of 1.5G for the dry cask storage strikes me as being extremely conservative given the worst case experience with earthquakes in the last century which was the Japanese earthquake and the reactor at Onagawa. In fact, there are ten or more safety margin based on that experience.

CHAIRMAN VICTOR: Thank you very much. I'm going to share with the panel and also share with the panel an additional set of notes from Glen Pascal (phonetic spelling) from our May 6th workshop. But this topic of seismic design has come up several times and we were asked to take a close look at it and we've done it.

And, Bill, thank you very much for you help in doing that.

I consider that issue and a lot of things that keep coming on the agenda. It seems like that's one of the issues we could take off the agenda for now. I know Gene Stone would like to comment on the May 6th workshop.

I also want to alert the panel that Larry Rannals from Camp Pendleton has a small correction to the record from the May 6th workshop. If anybody else would like to have the floor to make any comments or corrections about our records in reporting from the May 6th

workshop, if you could just indicate that with your flag. But right now, Gene Stone, let me give the floor to you, Gene.

MR. STONE: Would it be okay to ask Bill one question?

CHAIRMAN VICTOR: Very, very briefly because I would like to continue on.

MR. STONE: Bill, how far is the Newport-Inglewood Fault?

MR. PARKER: The last earthquake on the Newport-Inglewood was back in 1933, which I think it was 6.7 or so and that was off the coast of Long Beach closer than the San Andreas but also a lower potential earthquake strength.

MR. STONE: Thank you. I had a couple of things I wanted to correct and add to the information from the May 6th meeting. But first I want to just start off with some points that I think are very positive. And one of the areas in which we seem to have agreement and I see those as four right now.

And I say seem to have agreements and that is number one, everyone seems to be in agreement about the safest possible storage of the nuclear waste and the decommissioning process. Number two, there's no long-term waste dump at San Onofre. Number three is

consolidation of California's nuclear waste. Making -- number four, is making the recommendation that the U.S. Government does its job to store and establish a nuclear waste repository. So those are the positive things that I think that we're coming to if not consensus at this point but coming to strong agreements about.

So number one issue is the canning. It does make it safer because it does not allow the fissile material to touch each other when and if it gets broken during the transportation. So that's very important to remember. And part B of that is that the NRC has been talking about the possible canning of all high burnup fuel.

And I don't believe they've made a decision on that as of yet. AREVA says that the new technology of the 32 cask system just works better. But that's not much of an answer and there's no proof in that. So I did ask Michael to send me some documentation that we could have Marvin Resinkoff check the numbers on, which I have not received at this point.

He did send a chart last night, but it's more of a chart of what they think it will do without any of the ecalculations to check on that. Number three, is the NRC on June 29th is that -- is asking AREVA why they have two definitions for damaged spent fuel. I'd like to

know the answer to that as well.

The NRC seems to be questioning the fact that they changed the definition of damaged spent fuel. And I'm not sure under these conditions that you could even store damaged spent fuel in AREVA's 32 cask system. So I would like to initiate a study by Marvin Resinkoff on the figures, the calculations of the heat load because we know that the heat load in the high burnup fuel is considerably higher.

There just seems to be -- before we move forward at a later date on the dry cask issue that there is many questions and I hope that we could get AREVA back here again to discuss the 32 cask system. Thank you.

CHAIRMAN VICTOR: Thank you very much. I think -- if I could just push back a little bit. I think there is agreement that it would be important to have some mechanism for consolidating waste away from plants that are shut like San Onofre.

Whether that's a California solution or a Western State solution or something like that I think remains open and I think there are actually some important legal and technical reasons why it might not be done best in California.

But in any case, I think there's agreement that we need to look at a variety of other strategies, and I'll

talk more about that near the end of this meeting. I plan to personally oversee this process of the calculations related to canning and high burnup fuel and so on and the back and forth between the vendors and a variety of other technical points of view.

Because I think one thing that is very clear from the May 6th workshop and I urge people who were not there to look at the video from that because I thought that was an extremely informative workshop. There's a variety points of view about this issue of canning, about high burnup fuel, some new studies that will be coming out this summer about the integrity of the -- what's called the cladding around high burnup fuel.

And I think we need to be mindful of all things but we also need to be mindful of them in a way that does not generate paralysis around getting the fuel out of the ponds and into casks because that is really very, very important.

Let me see if there are any other comments that people want to make about the May 6th workshop or corrections to the record from that workshop before we move on to the main part of our meeting today. And I don't see any.

Let me give the floor now to Chris Thompson, who is going to talk about decommissioning and core

principles and values and comments and feedback that have come from the CEP. Chris Thompson, the floor is yours.

MR. THOMPSON: Thank you, David. Thank you everybody for being here, the panel members, the public. A couple of quick things. One is I wanted to take the opportunity to remind everybody something that was mentioned at the first panel meeting which is the three guiding principles that Southern California Edison has issued that will guide us through this process: Safety, stewardship, and engagement.

The safety as Gene mentioned is paramount. And safety of three things: The employees who are doing the work of decommissioning the facility, the local communities who live -- who surround the facility and the natural environment.

I had mentioned stewardship previously and something Tom mentioned -- touched on that. Which is we have a duty to our customers who have contributed to a decommissioning trust fund over the past 30 or so years to fund the decommissioning. We have a duty to them to conduct this work in the most cost-effective way possible while still mindful of safety and putting safety first.

At the end of this process when it's complete, we

will be refunding any leftover money in the trust fund to our customers. So I just wanted to remind everybody that cost is something we have to pay attention to. And the third is engagement. And I think this meeting continues to embody the notion of engagement.

This is our second regular meeting. As David mentioned we had a very interesting workshop on May 6th which lays out the manner in which it's our intention to do this. At the fist meeting we committed to the panel that the panel would have the opportunity for input on the major regulatory filings.

The first filing that is being reviewed by the panel is the Irradiated Fuel Management Plan, which the panel members have had a draft copy of for about a week prior to this meeting. The intention is to have a workshop with experts who can present facts on these issues, educate the panel, and then have the panel review the regulatory filing.

I agree with David that the May 6th meeting was extremely informative. I hope the panel and the public found it so. There were four very prominent experts in the field. Per Peterson a professor of nuclear engineering at Berkeley and a member of the President's Blue Ribbon Commission on America's Nuclear Future.

Marvin Resinkoff at Gene's request, a senior

associate at Radioactive Waste Management Associates. Mike McMahon who is the senior vice president at AREVA, which is the manufacturer of the dry storage cask currently on the site. And Drew Barto (phonetic spelling) who is a senior engineer in the division of spent fuel storage and transportation.

So tonight we'll walk through the draft of the Irradiated Fuel Management Plan. Tom Palmisano will lead us through that. It is our intention we have in our supporting role to capture the comments that are made by the panel members, capture the feedback that we receive on the draft plan.

If panel members have additional feedback or thoughts that they want to provide, Dan Stetson in his role as secretary of the Community Engagement Panel will collect those items of feedback, convey them to us. Two weeks -- our thought is two weeks after today's meeting, any thoughts from the panel to be provided to Dan who will provide them to us.

We will take that feedback and review all of the suggestions we get closely, incorporate appropriate changes to the Irradiated Fuel Management Plan as we finalize it, and let the panel know what we did and why. You know, whatever the list of feedback we get is we will let you know if a change was made to the plan in

accordance with that feedback or not. And if not, why not. So that is what we're going to commit to do with the panel. And that's all I have to say.

Thank you, David.

CHAIRMAN VICTOR: Thank you very much, Chris. So let's move on now to the main part of our -- main parts of our meeting. We have three major things we want to achieve tonight. First at our last meeting several members were keen that we get an update on the decommissioning timeline, in particular the areas where there is flexibility or uncertainty about that timeline. So that will be the first of our three major pieces of business.

Second is we will be talking about the Irradiated Fuel Management Plan as Chris just indicated. And then third after a short break we'll have a public comment period. So let's go now to talk about the decommissioning timeline.

Tom Palmisano, the floor is yours.

MR. PALMISANO: Can you hear me okay? Thank you, David. Can we have the slide back up, please. Thank you. Again, good evening. Thank you for joining us tonight. I'm Tom Palmisano the vice president and chief nuclear officer at the San Onofre Nuclear Plant.

So what I'm going to do over the next 45 minutes

or so is take us through review of the timeline, keep the panel and the public up to date on where we are in the process, and then review the Irradiated Fuel Management Plan and then we'll talk about some of the subsequent decisions we'll be making down the road related to spent fuel storage.

And, again, for the panel, I would urge if you have questions as I go, please ask them. We'll have a much more interactive session. Thank you.

Just to reiterate the principles. Chris has talked about safety, stewardship, and engagement. We've covered these, and we will continue to cover these and we do this internally with our folks as well as externally to ensure that we live our principles.

I'll talk about the decommissioning timeline and then we'll talk about spent fuel storage, kind of a recap of our situation for some members of the public who weren't at the first meeting or the workshop and to keep the panel up to date. And then we'll talk about the Irradiated Fuel Management Plan and future decisions that we will need to make.

Real quickly, just a refresher of where we are on the decommissioning process. The NRC requires the plant to be decommissioned in a 60-year timeline. It's broken into three phases. The decommissioning planning phase

on the left of the slide is intended to be a two-year phase.

So we entered that on June 2013. We need to be complete with our planning, all of our submittals into the NRC, and accepted by them June 2015, so we're in the middle of that first two-year phase. We're not authorized to do any major decommissioning, meaning I can't take the reactor vessel out or I can't take the highly irradiated components out.

The second phase is a long phase. It's a variable time where the major decommissioning and dismantlement occurs. Some plants in the country go to an extended safe period and decommissioned towards the end of 60 years. We're going to go relatively quickly into the dismantlement phase.

And then the last phase is two years preceding the end of that 60 years or earlier you enter a formal license termination process with the NRC which includes public comment, the opportunity for hearings where you actually demonstrate that you've, you know, dismantled the site, remediated the radiological conditions, and met cleanup criteria that are part of the license termination plan.

So at a high level that's the timeline. So where are we? We've committed to a 20 year or less plan.

Now, this is preliminary. We will finalize it as we make our submittals in the third quarter of 2014. And this is some of the things we look for public input on and particularly through the panel.

The time that's -- this is not to scale on top. This bold vertical line is the first two years and the rest is the remainder of the 58 years. As you could imagine we're focused on the initial activities at the site in the planning. So real quickly what's called physical plant changes, these are not specific decommissioning activities.

These are configuring the plants for decommissioning. So both units have been defueled. That would be part of these physical plant changes. All the fuel has been transferred in the spent fuel pool. We've certified we defueled the plants. We are busy draining systems. Shipping off-site low level radwaste for disposal.

We're preparing to deenergize unnecessary equipment at the plant to prepare the plant for the major dismantlement phase. So that collection of activities is called what I call physical plant changes in my simple chart here. The next phase, licensing submittals. These are not the three decommissioning submittals. That's coming up. These are the defueled

technical specifications.

These are an attachment to the license. We still hold an NRC license. We're licensed to possess special nuclear material, not to operate the plants. But I still live by a set of rules the government approves. These are my technical specifications. There's a revised set that I need -- that I have submitted that matches the defueled condition of the plant.

Much of the safety equipment that was designed to mitigate conditions in the reactors are no longer applicable because the reactors are permanently defueled. So that submittal has been made as well as a submittal for the Defueled Emergency Plan. With the plant permanently decommissioned and none of the fuel has been operated since the end of January 2012, a good bit of decay has already occurred.

So it allows us to propose changes to the off-site portion of the emergency plan. Those changes are proposed. They must be reviewed and approved by the NRC that is nominally a 12- to 18-month process, we've made those submittals at the end of March. And we said at the last panel meeting that was our schedule.

So those two submittals have been made, and they both take a year or more NRC review and approval process. Now, here are the decommissioning submittals

and I've highlighted in yellow the Irradiated Fuel Management Plan. These are three submittals unique to decommission. And I'll talk more on the next page.

Our goal is to submit all of them at the end of the second to early third quarter. Practically we're looking at -- I'm sorry. The submittals third quarter in 2014. I'm anticipating having everything finally approved in early 2015. That gives the NRC some time to review and approve it. And then down here is the dry fuel storage installation.

This is largely what we're going to talk about tonight and the subject of the workshop. This shows dry fuel storage engineering and procurement, expanding the dry fuel storage pad, fabricating canisters, and then ultimately off-loading the spent fuel out of the pools starting somewhere as early as the fourth quarter 2015, early 2016 with a goal to be done by the end of 2019.

Some of the feedback we've heard not just from panel members but other members of the public and other stakeholders is they would like to see us off-load the fuel pools earlier rather than later. So we are preparing a preliminary plan to do that and reviewing that with the panel. And that's what we will be finalizing through the course of the summer.

So let me ask questions from the panel on the

timeline in terms of where we are. Yes, sir.

MR. PARKER: You mentioned somewhere in that 60-year period the NRC -- you go into a very reduced level of licensing or perhaps no licensing at all.

MR. PALMISANO: Right.

MR. PARKER: Assuming that the spent fuel remains in dry cask storage past that time, is there an NRC rule -- role in regulating how those dry casks are maintained and monitored and so on?

MR. PALMISANO: Yes, there is.

MR. PARKER: So the NRC doesn't -- isn't removed from the picture?

MR. PALMISANO: No. In fact, as long as the ISFSI is here, we will still have an NRC license. What happens in license termination it's a misnomer. This terminology came up when we thought fuel would be shipped off-site.

So what happens today, the NRC when we remediate the site radiologically, the license will be reduced not terminated and it will exist for the independent spent fuel storage installation. We will be subject to NRC review, inspection, and monitoring for the entire time the ISFSI is there.

Then when the ISFSI is some day removed when the DOE performs and picks up the fuel, the ISFSI itself

will be decommissioned and we will go through yet another license termination process.

MR. PARKER: You will tell us what that word you used means, ISFSI.

MR. PALMISANO: ISFSI, Independent Spent Fuel Storage Installation.

MR. PARKER: Thank you.

CHAIRMAN VICTOR: This is the pad where the spent fuel is sitting, or the casks are sitting. Could I ask -- make one comment and ask two questions?

MR. PALMISANO: Sure.

CHAIRMAN VICTOR: The comment I would like to make is 60 years sounds like a long time, but I think one thing that is striking from this chart is that we're actually talking about getting the vast majority of this work done in a much briefer period of time.

Mainly moving the fuel out of the ponds in a period of a few years and then having the bulk of the decontamination and dismantlement done over a period of ten years or so. So I think just to kind of keep these numbers in perspective. 60 years is the kind of length of what is feasible I guess from a regulatory point of view.

MR. PALMISANO: It's allowable.

CHAIRMAN VICTOR: It's allowable. But I don't

think anybody who's sane would do that. And you guys certainly are moving this as quickly as you can and I think that makes a lot of sense. Questions I have are closely related.

The first one is, you mentioned a series of reviews by the NRC. How routine is that? Do we know roughly how long that process is going to take or is there big uncertainties about that? And second one related is where do you see the major uncertainties in the timeline?

MR. PALMISANO: Thank you for that reminder. So let's talk about NRC reviews. First, the license submittals. These are submittals for the defueled technical specifications and the defueled emergency plans.

This actually is a modification to our license. So this is nominally a minimum of a 12-month period typically for a change of this size, sometimes 18 months. So it's a well-defined NRC process. They process hundreds of license amendments a year for all the licensees. It's a well-defined process.

And a change of the magnitude that we're proposing and many other plants have proposed changes. A lot of plants revise their licenses periodically. 12 to 18 months is a realistic time frame to expect them to

complete and approve the license amendment. Now, the decommissioning submittals themselves are not license amendments because they don't modify the license.

And as we start getting into these, these are documents that are used to describe the plan for decommissioning and describe the funding assurance related to decommission. So, for example, the Irradiated Fuel Management Plan -- in fact, let me go to the next slide here.

The Irradiated Fuel Management Plan we're going to spend sometime talking about. This one they will actually review and approve with a safety evaluation. In looking at the other plants that have done these and all plants -- it's interesting this is required for any power plant five years before they plan to cease operation.

Now, we never got that close unfortunately. And it's required for a decommissioning plant within two years after you cease operation. So almost every plant in the county has already submitted one of these. Just a plant like us we were going to submit in 2017 to meet the requirements. This is something that typically takes on the order of three to six months.

And you've seen the draft that I'm going to take you through. It's not a technical document. It's

really to describe your plan and your funding. The Post-Shutdown Decommissioning Activities Report, this is one that describes your plan for decommissioning and summarizes your Spent Fuel Management Plan, summarizes your Decommissioning Cost Estimate.

This plan is required to be submitted to the NRC, and the NRC takes 90 days to review and accept it. They don't approve it per se like they would a license amendment, but they will ask us questions and they do hold a public meeting in the vicinity of the plant to explain the plan to the public.

CHAIRMAN VICTOR: So I mean, it sounds like all these things are routine enough. Where do you see the major uncertainties then in the timeline? Maybe there aren't uncertainties.

MR. PALMISANO: No. There are uncertainties, certainly. An uncertainty that is under our control is just the pace of deenergizing the plant. There is adequate time. My goal is to be deenergized by January 2016. That's an uncertainty that really is in our hands and it's just a matter of planning and executing the work.

Some uncertainty in the licensing submittals, the Defueled Emergency Plan will certainly get some attention. There's certainly been some letters recently

from Senator Boxer and other senators questioning or urging the NRC not to approve changes in emergency plans for decommissioning plants.

They've typically been approved and there is good technical and safety basis for it. But I think this will generate some pause on the NRC commission's part. And embedded in that plan are actually two license amendments and a list of exemptions request. And the exemptions have to go to the NRC commission for a decision.

So I think there is a fair amount of uncertainly as to whether that's going to be a 12-month or an 18-month timeline. So I think there is uncertainty there. There's much less uncertainty on the decommissioning submittals because they really aren't a technical or a safety issue.

So I don't see a lot of uncertainty there. Where I would say some uncertainty exists in my mind is panel comments. Since the panel this is only our second full meeting. We've had one workshop. We're in the process of defining -- the panel's defining how they interact, what their key questions are, what questions they're going to pose to us, what our responses are going to be.

So in my mind as I look at being ready to submit these in the third quarter one uncertainty is working

through the panel so we do a good job giving you the information you need. You have time to digest us and give us comments, and we'll respond to them. So a bit of uncertainty in my mind there. And then down on the dry fuel storage situation there is a lot of experience in the country as well as San Onofre on dry fuel.

It's a matter of once we make the decision on the technology, I think the schedule for that is fairly straightforward. So I would say the uncertainty is in the licensing submittals and, you know, just, you know, the comment period with the panel.

MR. STONE: Tom, I have an uncertainty that I would like to talk about. And that is you and I had a meeting and we were talking about how Edison figures the heat load of the material that's in the fuel pool. So how many years it stays in, how long it cools, who does those calculations?

Now, apparently -- I want to make sure I have this straight from what you told me the other day. Edison doesn't do those figures. These figures have been done at the national labs about cooling rates for radioactivity; is that correct? And that you don't have the ability to take the temperature of the fuel rod when you pull it out?

MR. PALMISANO: Well, Gene, I think you're mixing a

variety of things. We certainly know the heat load in our pool. We know our fuel assemblies. We know our current license cask design.

MR. STONE: But my point is that's by some chart, some calculation that's been done somewhere else instead of taken --

MR. PALMISANO: When the cask was designed and licensed, the vender provides a table that gives us an enrichment and burnup, you know, and, therefore, heat loads. So we use that and we apply that we review it and we have our vendors do calculations, Gene.

MR. STONE: So my point is that --

MR. PALMISANO: The specific question you asked me is could we pull a fuel rod and measure a fuel rod. We don't do that, Gene.

MR. STONE: Right. I understand that.

MR. PALMISANO: That's the question you asked me first, so let's be clear.

MR. STONE: Yes. But the reason I'm asking you that is because that heat load, the temperature in that fuel rod is so important to taking it out of the fuel rod and storing it. Now I understand. I've seen the information of the amount of heat load that the new 32 cask can take.

But my point is cooling can take longer and the

NRC doesn't seem to be -- have a consensus about the best timing for that. And I understand that you are telling me six to seven years or five?

CHAIRMAN VICTOR: Let me suggest that this question which does turn on some important calculations that we put this question together in the form of a formal query. I will also share that with the NRC.

The NRC has asked me to visit in the middle of July to talk about a variety of issues and so I'll share that with them and also with the cask vendors and we'll get answers to all of this. Because I think the technical details matter here. And maybe instead of going back and forth with the technical details in this setting. We'll get all that information and we'll circulate it to the CEP and to the public.

MR. PALMISANO: That's good because the technical details exist.

MR. GARRY BROWN: I have a question of general nature. On this timeline a lot of approval process you have a submission and then the agency, in this case, NRC has to review and approve or adopt.

MR. PALMISANO: Right.

MR. GARRY BROWN: Is this totally driven by submission date? You're in compliance if you submit a plan on the date it's supposed to or is there anything

about what if it takes them a year to approve it and review it?

MR. PALMISANO: The three that are driven by a date are the three decommissioning submittals. I must submit those within two years of the decision.

MR. GARRY BROWN: As long as you hit that date, you're in compliance?

MR. PALMISANO: Yeah. If they take more time than that, I'm in compliance. And, you know, quite frankly, that's not going to be a problem to get those submitted. And if they take more time, that's on their nickel and we're okay, if that's the question.

MR. QUINN: I really just want to bring up this point. San Onofre unit 1 has been decommissioned. It's the only unit in the nation that was decommissioned while there was operating units still on the site. Could you describe if there is lessons learned that we have from the unit 1 discommissioning timeline that apply to this because I understand unit 1 was very successful.

CHAIRMAN VICTOR: For the record, that's Ted Quinn. And maybe answer that briefly because we're going to move on to the next segment.

MR. PALMISANO: Yeah. Let me be brief, and I'll be glad to come back in and talk in more lengths. Because

we are scrubbing our unit 1 experience because we have been very successful like you said, Ted. It's the only unit to be decommissioned while two other units operated on site.

And so the lessons we're taking we entered safe store for a period for, I want to say -- I wasn't on site at the time -- on the order of almost 10 years before we started the dismantlement phase. So we had adequate time in safe store, selected the dry fuel. Took care of that. Then the dismantlement itself went pretty effectively given we had two operating units.

So the lessons we're looking at in terms of how effective we plan for that activity, the staffing, how we manage the contractor. So we're taking those lessons as well as our lessons with some of the state permitting, decisions on leaving the conduits in place which is more environmentally beneficial than removing them.

So we're factoring that into the planning. Okay. Now, and unit 2 and 3 will be a little different because we're removing the entire site.

CHAIRMAN VICTOR: Anything else before we move on?

MR. PALMISANO: So the submittals -- I'm going to talk about real quickly Irradiated Fuel Management Plan, so let me skip that. Post-Shutdown Decommissioning

Activities Report. A summary level document as we prepare for the discussion with the panel. I shared a couple of other units' irradiated fuel plans will do the same with the Post-Shutdown Decommissioning Activities Report.

Site specific decommissioning and cost estimate. This is really the document that really analyzes the cost and feeds the other documents in terms of the costs of the decommissioning. The emergency plan I've already discussed and the defuel tech specs where we are today we're talking Irradiated Fuel Management Plan and as Chris said looking for your feedback.

We are preparing for this summer working on dates with David and the panel to review the drafts of the Decommissioning Activities Report and Decommissioning Cost Estimate with our target date for me to submit to the NRC in the third quarter. We've already submitted these two and they are at the early phase of the 12- to 18-month NRC review and approval process.

So with that I'm going to move on and recap the spent fuel storage situation and then we'll move into the Irradiated Fuel Management Plan.

CHAIRMAN VICTOR: Great. Thank you.

MR. PALMISANO: So several of you have seen this slide before. Certainly the panel has seen it twice.

Very quickly what is on site down in the lower left here is what's on the existing dry fuel storage pad. There are 50 canisters loaded with unit 1 fuel, unit 2 fuel, unit 3 fuel.

1,187 fuel assemblies, which include eight high burnup assemblies. What is in the two spent fuel pools, unit 2 and 3. 2,668 assemblies. Roughly a 50/50 split. In the workshop we had the specific numbers. So what needs to happen with those, they need to be moved to the dry fuel storage system.

It will take approximately 100 canisters. That's approximate because our plans have not been finalized. We have not selected the final canister size we're going to use. So right now a number of 100 is based on a 32 assembly canister.

Again, not a final decision. And 1,115 of those are high burnup fuel assemblies. And we discussed that quite a bit at the workshop. And then ultimately at the end of the day when the Department of Energy performs, they will remove 3,855 fuel assemblies that will be in approximately 150 canisters. And these canisters are licensed and the new ones will be licensed for storage and transport. So recap.

We talked about this already. Kind of give you the breakdown. Here's a more specific breakdown of the

high burnup assemblies, eight in the dry cask system today. In unit 2 we have 570 and unit 3 545 in the spent fuel pools. For those of you that have not seen it before, this is a picture of one fuel assembly being handled under water in a spent fuel pool.

This is a picture of a cask and actually the canister is inside the cask. You see this is a transfer cask. This is after a canister has been loaded with a number of fuel assemblies, welded shut, evacuated, dried, and filled with a helium cover gas and then ready to move to a storage location. This is actually a picture of the SONGS site.

We use a horizontal storage system currently. Inside this transfer cask is a steel canister which is then inserted into this heavily shield concrete module and then a shield cover is put on there and you could see this is the actual picture at SONGS with the canisters that are currently loaded.

Looking at unit 2 and unit 3, this is the old unit 1 location that has been decommissioned and removed and this is the area where the current independent spent fuel storage installation is.

MR. STONE: Tom -- this is Gene. What is the official status with the decommissioning of unit 1 because part of it is on site --

MR. PALMISANO: It's not complete.

MR. STONE: So it's not complete.

MR. PALMISANO: Yeah. It's partially decommissioned. As I said, the fuel is off-loaded, the physical plant above ground is removed but some of the substructures remain in place and the plan has always been to remove those when units 2 and 3 are decommissioned.

MR. STONE: Right.

MR. PALMISANO: And so we have not gone through the license termination on unit 1. So with that recap of the spent fuel storage situation I want to move on and talk about the Irradiated Fuel Management Plan. Now, we sent this to the panel as a preread.

We also sent copies of the Kewaunee and Crystal River plan which have already been submitted. So I'm just going to take you through it in outline level. So the requirement for the Irradiated Fuel Management Plan is out of Title 10 of the Code of Federal Regulations part 50.54 paragraph double Bravo.

And I've extracted this to state the pertinent requirement. So the licensee shall, within two years following permanent cessation of operation of the reactor submit written notification for review and preliminary approval of the program by which the

licensee intends to manage and provide funding for the management of all irradiated fuel at the reactor.

Until title of the fuel and possession is transferred to the Secretary of Energy. That is the basic requirement for the plan. So our Irradiated Fuel Management Plan, the program is basically move spent fuel from the spent fuel pools currently in wet storage to the independent spent fuel storage installation.

The NRC reviews in accordance with its standard process, they review it for completeness, which means what they would call an acceptance review to say it doesn't meet the requirement to be reviewed. They then do a technical review, a safety -- and write a safety evaluation report.

What we found is unlike some other documents if you look at other types of things in the industry that are required to be submitted to the NRC this one is a fairly high-level document. The NRC doesn't have a specific format or standard content guidance as opposed to let's say the license amendments for the emergency plan are very prescriptive about what needs to be in there, what needs to be addressed, what needs to be explained.

So what we did, as I said, every plant in the county has to file one of these either five years before

they cease operating or within the two years after they cease operating. So there were many examples and many examples the NRC have reviewed and approved. So we've pulled the ones -- we pulled virtually every one of the last decade to review it for content, level of detail, and reviewed the NRC questions that were asked. Specifically we looked at Kewaunee and Crystal River who shut down in this last year or two and have already submitted these documents.

We also looked at Zion, which closed in the late '90s outside of Chicago but is currently in the dismantlement phase. So based on that the key points. So we described the 2,668 fuel assemblies currently in the spent fuel pool to be transferred to the ISFSI by 2019. We also described the fuel that's already on the ISFSI pad since that has to be described in terms of management funding.

We have to explain the dates by which we assume the Department of Energy will start taking fuel. So the latest information we have from the Department of Energy, and I won't comment on how likely it is, assumes the Department of Energy starts a pilot facility in the 2021 to 2024 time period and that for in our case that they would remove all of our fuel by 2049.

CHAIRMAN VICTOR: This is just -- let me interrupt.

This is just a procedural requirement.

MR. PALMISANO: Right.

CHAIRMAN VICTOR: And it's shown in table 3 of the plan that you circulated in the draft. But it doesn't have a material impact on your selection of casks or anything like that. In fact, one of the things we learned from the May 6th workshop is that while the casks are licensed for a 20-year period, they are designed for the constant --

MR. PALMISANO: Much longer.

CHAIRMAN VICTOR: Regular renewal and their physical length -- their physical lifetime is essentially much, much longer.

MR. PALMISANO: That's correct. This is just something really to lay out a timeline to propose funding and show that funding is adequate. The other thing -- the next bullet will show adequacy of existing funds to cover all aspects of decommissioning including the cost of irradiated fuel management.

It's a living document. This document will be updated several times especially as the DOE timeline plays out and we continue to look at funding adequacy as we go forward. We certainly will update it as we complete off-loading the pools to update the plan to note that spent fuel management is now focused on the

dry fuel storage installation.

And then as part of this we do explain that as part of the decommissioning process the spent fuel pool cooling systems will be changed. We will be decommissioning and dismantling the normal cooling systems so we'll put in stand-alone cooling and filtration units which is typically known as a spent fuel pool island.

In other words, you build a special system just to cool the spent fuel pools with the appropriate reliable power supplies that is just dedicated to cooling spent fuel pool so as you dismantle the power plant you eliminate the risk of disrupting spent fuel pool cooling. So that's known as spent fuel pool islanding and our plan discusses that.

CHAIRMAN VICTOR: And it is your view that that is safer than keeping the current arrangements for basically moving sea water in and out?

MR. PALMISANO: Well, a couple of comments. Certainly from the ability to cool the fuel it is certainly as safe as the normal installed systems. When I look at the risk of what could happen in a plant that is no longer operated, today's systems require salt water cooling pumps pumping water to an intermediate cooling system which then cools spent fuel pool cooling.

It's fairly complex. It requires a good bit of the installed plant electric equipment to stay energized but lightly loaded which becomes a bigger problem over time to start failing and faulting. So by putting in a dedicated cooling system, I could assure, quite frankly, a higher level of reliability and there is a link to safety in that sense because I could isolate it, protect it, a higher level of reliability than leaving a system distributed built for an operating plant. So it makes a lot of sense for a variety of reasons.

CHAIRMAN VICTOR: And has the reliability been analyzed -- the case logically makes a lot of sense to me. Has this actually because analyzed? Is there a way for us to look at that? It seems like that's an important assumption built in here.

MR. PALMISANO: I would have to check. You know, about half the decommissioning plants have done this. But these are only in service for about four to five years. So it's not like you've got a 20 year -- or 10, 20, or 30 year reliability history.

These are fairly short-term systems that are in service compared to say a 40-year life of a plant. So I don't know that those kinds of reliability studies have been done. We could take that for action and certainly get some information of plants that have done it. I

tell you personally I did this -- I managed the Palisades plant in 1990, an operating nuclear plant single unit.

Operating plants do this for maintenance reasons every five to ten years in an outage when you've got to take your normal cooling system out. You put in these alternate cooling systems. I've had direct experience with that and you engineer them and design them to assure the reliability that you need.

CHAIRMAN VICTOR: Thank you.

MR. PALMISANO: So the NRC review criteria. So I told you there's not a lot of specific content or format guidance. So what we did, the NRC does write a safety evaluation report on every one that they approve and these are public documents, so we extracted again virtually every one that's been approved.

These are the questions and the NRC is very clear in their safety evaluation reports these are the questions they evaluate so beyond just looking at the description of the plan and how spent fuel is going to be managed, they really focused on demonstrating adequate funding.

Estimated costs to isolate the fuel pool, this is the spent fuel pool island I discussed. Fuel handling systems or the cost to construct an ISFSI or the

combination of wet and dry storage. Annual cost of operation of the selected option until DOE takes possession.

Estimated cost of preparation, packaging, and shipping to DOE. Estimated cost to then decommission the spent fuel storage facility at the end of that period when the fuel is removed from that site. Then a brief discussion of these areas and the estimated times. So they want us to explain the plan, what the timeline looked like, what the funding is, what the funding is based on.

MR. PARKER: How can you do that when in reality --

CHAIRMAN VICTOR: This is Bill Parker just for the record.

MR. PARKER: I'm sorry. Bill Parker. How can you produce these estimates when in reality you have no idea when the DOE is going to take possession of these fuels? Do you work under the assumption of the guidelines, which means you're coming up with estimates and so on that we all know are going to be wrong?

MR. PALMISANO: So that's a -- the way we do it is exactly what you said, I make an assumption. I assume that, naively maybe, that the Department of Energy is going to start to perform by 2024 for the industry.

MR. PARKER: Right.

MR. PALMISANO: And then I assume that based on a queue that has been established by the Department of Energy, they will remove our fuel by 2049. And that's been fairly easy to lay out the cash flow to support the construction, the operation, and the eventual decommissioning of the ISFSI.

Now, the reason it's got to be a living plan is we know that even after we're off-loading the pool every number of years we're going to have to revisit that assumption.

MR. PARKER: What's going through my mind is how can you make any commitment to the ratepayers and others as to what the cost will be when you might have decades of additional responsibility for on-site fuel management?

MR. PALMISANO: Well, the Public Utility Commission has a process by which we will make periodic reports of the decommission cost estimate and the to go cost and have to explain the continued assumptions. And a process to reconcile whether there is no funds, more collections are needed.

MR. QUINN: Tom, most of the -- many of the utilities in the United States -- this is Ted Quinn -- have sued the Department of Energy. Has Edison sued the Department?

MR. PALMISANO: Yes, we have. Good point here and I appreciate you jogging my mind on that. Since the government has failed to perform and they were under contracts with us, with every other utility, the government essentially is in breach of contract. So we and many other utilities have sued.

We've actually won the first lawsuit, received a settlement or an award out of that to cover the cost of the ISFSI, I think to 2005. We have a second suit pending that will take us 2005 through 2010. So we will continue to recover costs. Now, you recover in arrears, so obviously we need to be sufficiently funded to cover the costs.

But the Department of Energy has agreed to and established protocol now for all the utilities to continue recovering funds for their inability to perform.

CHAIRMAN VICTOR: Can I just summarize the -- I think the tenor of the last two comments is that when we get to looking at the decommissioning cost estimate, the DCE, which will be the subject of our next formal meeting. Let's be sure that we as a panel take a look at the financial adequacies assumptions that are there.

If the Department of Energy -- you know, gee whiz, they might not do anything in which case then there

would be a long-term obligation here. Let's just take a look at those and make sure that that's consistent. Because I think that's built in but we just need to make sure the present is the value of that obligation.

MR. PALMISANO: Good. Appreciate it. Thank you.

MR. TIM BROWN: You know one thing I've learned in government is that everything costs more than you think it will or at least than you initially present for. And so the question I had is what contingency do you have to establish on these? Is there a reserve that you have to establish when you're developing these costs? And how often do you meet those targets? I mean, how accurate can you be? It's a really good question.

MR. PALMISANO: We do build contingencies and if you don't mind I would like to defer that to the next meeting because in the next meeting I'm going to bring both the Draft Cost Estimate and the Post-Shutdown Decommissioning Activities Report. And that's going to give you the whole picture on the cost estimate for spent fuel decommissioning. We'll be able to talk about contingency assumptions.

MR. STONE: Tom, Gene Stone.

CHAIRMAN VICTOR: Hold on a second, Gene.

MR. STONE: At the same time can you tell us --

MR. PALMISANO: I think David wanted to --

MR. STONE: Oh, pardon.

MR. ALPAY: Tom, this is John Alpay. I just want to ask, I mean, you filed new lawsuits in arrears against the federal government for breach of contract basically. So you got to go to the Court of Claims in New York and recoup that. I mean, there's time, value, money, and attorney's fee, transaction costs associated with that. I assume that's being recouped as well.

MR. PALMISANO: Yes. The right financial guys and right legal guys know how to package that. And again, the DOE has got into the settlement process with most nuclear utilities across the country, so there is a pretty good template laid out on what you could claim, what's appropriate, and what they've agreed to. So that all goes into factoring into what our damage claim is.

MR. ALPAY: So basically what I'm hearing you say is you got to file a claim officially with the court and then basically you just go into settlement discussions basically?

MR. PALMISANO: Essentially, yes.

MR. ALPAY: And if I could ask one more question though. You talk about the 2024 date, or whatever it is the DOE provides, is that something that they issue and revise periodically? Where do you get that number? Obviously it's made up.

MR. PALMISANO: The latest number came from a January 2013. The Secretary of Energy issued a report. It was actually a response to the Blue Ribbon Commission that laid out the administration's plan and what it has in it. And I'll paraphrase it and we could provide a copy to the panel for background reading and post it on our website.

What it says essentially is they are going to approach it in terms of a pilot interim storage facility followed by a full scale interim storage facility. The pilot facility they would project to be operational by 2021. The full scale interim facility by 2025 followed by continued work on a permanent repository.

Now, subject to all the discussion about consent base siting and everything, but this is -- I looked to point to something official the best that I can of the DOE. And this is the best we have, January 2013.

MR. ALPAY: Okay. That makes sense. I don't want to belabor the point. But if we could get a copy to the members.

MR. PALMISANO: We'll be glad to get you a copy of that.

CHAIRMAN VICTOR: Maybe we'll also -- it will be useful we could circulate to the CEP some kind of a summary, an update on the state of these lawsuits. I

think as a practical matter it would be irresponsible for us for planning purposes to believe anything the Department of Energy says in this area, so we shouldn't think about the backstop.

Gene, do you want to comment briefly on this and then we could let you go on.

MR. THOMPSON: Just a point of clarification of what Tom said. The two-step process that the Secretary of Energy has laid out, the 2021 is the decommissioning plans. That's the fuel they are planning on taking first.

MR. STONE: So, Tom, can you tell us how does the money that Edison gets from the DOE now to store nuclear waste, how does that fit into the finances of decommissioning? Does that go -- added to the decommissioning fund or is that profit for Edison? How does that work?

MR. PALMISANO: I think, Gene, again, in the next meeting we're going to talk about the decommissioning cost estimate. That's a question better suited --

CHAIRMAN VICTOR: Let's set these questions aside until the next meeting. I think that we should put all the numbers on the table at the same time.

MR. STONE: Just one other point on Zion, you were talking about Zion. Zion, I believe, who is ahead of

us, as you mentioned, in decommissioning. They have canned all of their high burnup fuel; is that true?

MR. PALMISANO: I don't know that specifically, Gene. I could find that out for you.

CHAIRMAN VICTOR: Why don't you continue, Tom.

MR. PALMISANO: So again, what does the Irradiated Fuel Management Plan not include? Again, we want our principles to be transparent. We want to make sure, you know, what the plan contains and what it does not address that we will be deciding later.

It doesn't address the actual expansion footprint of the storage installation. It explains we need to expand it, but it doesn't contain the level of detail on exactly how it's going to be expanded. That is a decision we'll make later, and we'll get some input certainly on that.

It doesn't discuss the selection of the fuel canister, vender, design, or type, nor does it discuss decisions on canning or not canning, things we talked about at the workshop.

MR. QUINN: Tom, this is Ted Quinn. You mentioned that there's a -- your study underway to evaluate moving up the schedule for moving spent fuel from the pool to the canisters. You mentioned that at the beginning of your talk?

MR. PALMISANO: Well, our current plan is to off-load the pools by the end of 2019.

MR. QUINN: Right. But you said there was an evaluation underway to see if it could go sooner; is that --

MR. PALMISANO: Oh, yeah. I think I was referring to whether it starts in the fall of 2015 or early 2016. Yeah. So I'm evaluating that.

MR. QUINN: My interest was whether that was included in the Irradiated Fuel Management Plan.

MR. PALMISANO: The Irradiated Fuel Management Plan talks about finishing by 2019. It doesn't get as specific as if I start in 2015 or 2016. Again, some of the schedule uncertainty is fairly defined once we make our decisions.

But the specifics of whether I start off-loading fuel in 2015 or 2016, we'll make those decisions down the road after we have the pad expanded and the canisters selected.

CHAIRMAN VICTOR: But I mean the practical -- this is in table 3, which is the final page of the draft, the practical implication of this is that it's possible to get the fuel, in theory, out of the pond maybe a whole year earlier than the plan.

MR. PALMISANO: Correct.

CHAIRMAN VICTOR: Is that -- that's a reasonable interpretation and you guys are evaluating that option and I'm sure there are important ecalculations is all to be done.

MR. PALMISANO: Again, at this point in planning I like to be conservative and ensure that I'm not committing to something we cannot do. So as we proceed through the next year and the planning gets more specific, decisions are made on pad expansion and cask selection.

In a year I'll be much more specific on I expect to complete at this point, be able to start off-loading fuel at this point. So now you'll see -- let's say a more conservative longer time frame. There are opportunities to off-load the pool earlier if the next year moves fairly effectively through some decision-making.

CHAIRMAN VICTOR: Within the limits of safety that would seem like a great thing to do.

MR. PALMISANO: You know, one of the things we've heard from stakeholders and it's not necessarily just in a venue like this a couple of key things, you know, the public, the stakeholders would like San Onofre dismantled sooner rather than later.

To not be in safe store for 40 years. And the

public would certainly urge us to consider off-loading pools to the dry cask system sooner rather than later. That's some of the principles -- if you go back to some of our principles, we actually talk about the safest earliest transfer of spent fuel to the dry cask storage system embedded in our principle.

So that's a planning basis at this point. Again, the plans are preliminary, nothing is final. But this is the dialogue we want to have.

MR. STONE: Tom, Gene Stone. When is the DOD study on high burnup fuel going to be done? About how soon it could be removed? Aren't they --

MR. PALMISANO: Well, I don't know that the Department of Defense is doing anything, Gene.

MR. STONE: Pardon. The Department of Energy.

MR. PALMISANO: Well, you asked the NRC rep that. That study is the Department of Energy's. I don't know what their timeline is. I think he committed that the study will be made available when it's ready. I don't have any specific data on when they are going to do their study, Gene. Okay. So recent submittals we compared. I've mentioned Crystal River and Kewaunee just to give you a quick comparison.

Crystal River and Kewaunee are both single unit plants. We have 2000 megawatt PWRs. Crystal River is

on the order of 8- to 900 megawatts. Kewaunee is a little smaller on the order of 7- to 800 megawatts. So you see smaller number of fuel assemblies. Kewaunee has 1,079. Crystal River 1,243.

Kewaunee already has a dry fuel storage system with some assemblies in it. Then obviously we have 2,668 in the pool. You could see the comparative dates. Right now Crystal River is anticipating being complete from wet to dry storage in 2019. Kewaunee is going to be more aggressive and be done by 2016.

We're forecasting 2019. And then you see the submittal dates. Crystal River has actually made two submittals of the Irradiated Fuel Management Plan, their most recent one in December. Kewaunee has made three. The first one five years before shutdown. And then they've updated it. In February when they announced the shutdown, they updated just this last month.

So you could see how these are used as living documents as planning changes. You update the document to keep the NRC apprised of your spent fuel management plan.

CHAIRMAN VICTOR: Can you say what are the major reasons that these get updated?

MR. PALMISANO: Generally it's timing changes. You know, because as you've seen from the plan they're

written at a fairly high level. It's not driven by I'm using this cask or that cask. It's really driven by timing or funding changes.

CHAIRMAN VICTOR: It seems to me that this panel ought to in the first quarter of next year take a fresh look at where -- because we will have learned a lot more information at that point and also been able to look at any updates of the other plants so maybe we could take a look at that the first quarter of next year.

MR. PALMISANO: Very good. So some future decisions that we're faced with. You know, we currently use an AREVA TN NUHOMS system. Several of you toured the facility. I've shown pictures of that. When we decided to decommission, we stepped back and said we're just not going to presume we're going to stay with the first system.

It's an expensive decision for us and for the ratepayers so we went out for bid. We have not completed the bid evaluation. We have three very viable vendors AREVA Transnuclear, Holtec, and a company called NAC. They all have good designs. They are all deployed in the industry in one size or another, one fashion or another.

So this decision has not been made yet. So this is something over the next several months we'll be

finalizing our bid evaluation on. The AREVA system currently is licensed to meet our specific requirements particularly seismic.

The Holtec system which is in use at Humboldt Bay and Holtec has been used in a number of plants in the country. But particularly this Umax system is being installed at Humboldt Bay would only require a minor license amendment to accommodate our seismic requirements.

And then the NAC system, the design would have to be modified to meet our criteria and require a more involved license amendment. So I just want to kind of recap the three different systems we're looking at. Part of that decision is canister capacity. We currently use a 24 fuel element canister provided by AREVA.

The ones we use are uniquely designed for us because of our high seismic criteria. The current AREVA system that they are producing and using is the 32 element system that would meet our seismic requirement. The other vendors are using a 37 fuel assembly canister, so those are the range of possibilities.

We've got a question about canning of high burnup fuel. We have not made a decision on that. And we are certainly listening to the dialogue about that and

listening to the different viewpoints and evaluating the potential benefits, the potential negatives and, you know, the consequences in terms of number of casks, et cetera.

And then the ISFSI expansion itself. By location, I mean, taking the existing pad -- and let me show you a picture. Here is where the existing pad is in red. If you remember that picture, this is where the old unit 1 physically was. What's in red today is the existing pad. What's outlined in green is one proposed expansion just stretching the rectangle.

Since the last meeting, we've done a little more work as we finalize it on the square footage. So a couple of options. I could go towards the west. The pad -- you know, roughly double the size of the pad from 55,000 to 92,000. We could go more in this direction, this way, and then little longer with a total of 94,000. So we're evaluating what technically is appropriate, what makes the most sense.

So with that I just want to reinforce our principles: Safety, stewardship, and engagement. And a better engagement is transparency and that's what tonight is all about.

CHAIRMAN VICTOR: Let's get some comments from the panel before we take a break.

Bill Parker.

MR. PARKER: Bill Parker. To what extent does the decisions concerning canning relate to the decisions about the design of the canisters or are they independent?

MR. PALMISANO: No. They are somewhat related. You know, we haven't -- because we haven't finalized on a canister design. We're starting off to talk to all the vendors about what canning would entail. For example, when Mike McMahon from AREVA was here he explained in their 32 element design they would take the existing storage cell and they would put a cap with holes on the bottom and cap the holes on top.

That's how they would can an assembly, so they would put caps. If we were to want to stick with let's say a 24 assembly canister, which they don't make anymore for our design, we would have to tool them up. They would have to do significant more reengineering work on the internals to make that feasible. So it's got to be interactive with the design.

MR. PARKER: So the two decisions have to go together?

MR. PALMISANO: Well, the first decision -- I guess, to some extent, yes. We wouldn't select a canister solely based on canning complexity or not. But

we're not going to be independent. You know, we're going to select a canister based on what's technically appropriate, what has the right safety margins, what's licensed.

So we'll make the appropriate canister decision there. Then we'll look at what the implication of canning are -- the implication of canning is. And see it that alters the decision.

CHAIRMAN VICTOR: Tim Brown.

MR. TIM BROWN: Just for simplicity purposes, the detailed flow chart made my eyes hurt, so I want to get some relief from that. So you've got the NRC future decisions for spent fuel storage. There's three items here. When do these decisions have to be made?

MR. PALMISANO: On a time -- these are not needed for the Irradiated Fuel Management Plan.

MR. TIM BROWN: Okay. Not for the plan. But is it in two years?

MR. PALMISANO: No. No. I would say by September. If we're going to hold to that schedule to have fuel off-loaded by 2019, we need to make our decisions on canister selection and pad expansion by September.

MR. TIM BROWN: By September of this year?

MR. PALMISANO: Yeah. Other than that it just starts meaning fuel in the pools longer and longer.

CHAIRMAN VICTOR: So that tells us that there are actually potentially safety consequences to delay?

MR. PALMISANO: Well, there are certainly consequences. You know, the NRC's position is fuel is safe in the fuel pools. It's safe in dry storage and certainly I could explain that, I think, from my standpoint the decommissioning process is simpler the sooner I off-load the fuel pools. And it is more cost effective.

CHAIRMAN VICTOR: I saw another question down there. Ted Quinn.

MR. QUINN: Yeah. Ted Quinn. Rancho Seco I think is the nearest plant. Do you know what they used for their canister design?

MR. PALMISANO: Let me think. We have benchmarked them by telephone because they have already gone through license termination. Let's see if my spent fuel guys are in the room. Ed, do you happen to know what Rancho Seco used?

ED AVELLA: No.

MR. PALMISANO: We'll have to get back to you on that.

THE MEMBERS OF THE PUBLIC: NUHOMS.

MR. PALMISANO: That's right. NUHOMS. As a matter of fact, NUHOMS. Yeah. They used the NUHOMS horizontal

system. Thank you.

MR. TIM BROWN: Who are these people that know this information hanging out? I'm kind of surprised.

CHAIRMAN VICTOR: We're going to have some long math questions in a moment. Other comments?

MR. GARRY BROWN: I have a question. So going forward when we look at the dry storage site, in your mind, in your plan is there only one option to expand the site where it is now or is there any idea to look at other options, other sites?

MR. PALMISANO: So for us to be complete, we are asking that question. So here's how the options would stack up. Right now our independent spent fuel storage installation is licensed under our part 50 license. That's an approved NRC mechanism. So today if I'm to cite a pad the existing pad obviously is appropriate.

I would -- if I cite a different or a second pad -- and when I managed the Palisades plant in Michigan, I actually had two pads that were a quarter a mile apart, so that is possible. Under my current license for me to license it the way I do today, it's got to be in my part 50 licensed area, which is largely the area where the power plant is.

For example, we have some facilities on the Mesa that we lease from the Navy. That is not part of my

part 50 license. So I've asked the question could I cite a facility on the Mesa. Okay. Potentially anything is possible. Okay. It's not part of my part 50 license. It would require a separate NRC part 72 license process, which is about a decade before, you know, I could off-load the fuel pools when you look at new license process.

So -- and not to mention the fact it's not our land, the Department of Navy would have to agree, you know. There's a lot of barriers there. And then we talked in earlier meetings about something away from reactor interim storage. You know, those are the things that I don't have the ability to really propose as a way to support a 20-year decommissioning plan.

CHAIRMAN VICTOR: I visited the site a while ago, and I had the impressions -- because it's an unusual site because it's hemmed in by the 5 and the ocean and so on. That there seems to be a very strong premium on having this as a contiguous location.

Not least because you're going to have going on at the same time as the dry cask storage the removal of units 2 and 3. What seems to be for safety reasons and for the ease of licensing a big premium on having the --

MR. PALMISANO: Ideally from a technical and a regulatory licensing standpoint expanding the existing

pad, and the subsurface has already been engineered and compacted for that, would make the most sense in that sense.

As you look at the practical aspects, it requires a security installation that's equivalent to what is used to protect the reactors. The problem with my old plan in Palisades in Michigan I had basically two security installations with more security officers instead of one. So it becomes a bit more challenging.

And then with decommissioning coming up and all the activity in the dismantlement in the vehicles. If you've got two areas you've got to protect, not just from a security standpoint, just a practical standpoint to assure their integrity having two different areas on this small footprint, is problematic.

MR. GARRY BROWN: So really you're answering the question. You're saying well, with the legal parameters, with the timeline parameters, we only have one option, expand this site?

MR. PALMISANO: No. What I'm really telling you is the practical option to support 20 years is somewhere on the part 50 footprint. I could pick one or two other areas that might make some sense, but they are subject to duplicating security needs, some of the lay down. The other thing is it gets them up to the level of I-5.

And I don't know that we want the facility at that level as opposed to a lower level. You know, from a visibility, esthetics, and radiation shielding.

CHAIRMAN VICTOR: Could you remind us what this is going to look like. We talked about this last panel, the panel meeting. But there's going to be a berm around this so it doesn't really matter which cask vendor you use. It's all going to look the same to the public?

MR. PALMISANO: In general terms, yeah. You know, one of the options that other plants have done is once you're done with your expansion, I just called up the simplified picture, you know, you build a berm around it for a variety of reasons.

One of which is just the esthetic value that you see a berm, you don't see the storage modules themselves. Those are options we haven't decided yet and the decisions, for example, on a berm is not a decision that has to be made by September. What I need to make by September: The cask selection, the pad location, so I could start the longer lead time engineering procurement. With other questions like esthetically what's going to the finished case could come later.

CHAIRMAN VICTOR: So as a practical matter what

would you like from us? You know, we've all had a chance to read this 10-page plan and it mostly is kind of laying out a strategy.

MR. PALMISANO: Right.

CHAIRMAN VICTOR: And the strategy, you know, has certainly decisions about which vendor and things like that. Where would you find feedback from this panel to be of greatest value?

MR. PALMISANO: What I would tell you in feedback from the panel starting at a bigger picture, 20 years or less. Does that make sense to the panel? Does the panel want to say slow down, let's take 30 to 40 years? You know, so first of all, the length of time to decommission.

I think it's important if the panel thinks differently, we need to hear that. We're proposing a 20-year plus plan because we think that's what makes the most sense to our stakeholders, to us to get this done and get this behind us. So that's one thing.

Any other comments about the selection not so much the selection of the vendor, but the parameters you would like us to explain as we make our final decisions on canister selection. We'll take your input, and we'll feed back to you what we've decided.

And then any comments, you know, in terms of

understanding pad location. If you want me to explain that further. Those are the types of things.

CHAIRMAN VICTOR: So if I could just kind of summarize what I've heard so far. From the panel members having just talked about these kinds of issues with many members, I haven't heard anybody say slow down. I have heard people say let's make sure this is done safely and concerns about heat, flux, and so on.

So maybe if there are comments about that in particular because that has a big impact on your plan here. We could solicit a few views right now, there may not be any. And then people could provide additional comments over the course of the next two weeks. And then I do want to raise a question about the possibility of having two vendors on site. Did you want to comment on this?

MR. PARKER: Bill Parker. It strikes me that one of your parameters as you think about canister design, vendor, and so on, is the flexibility the design offers for you to manage the fuel on site for periods greatly beyond the ability to repackage, the ability to service.

So I think as you select -- you don't -- it's not just does it last 20 years. But are you choosing something that minimizes costs, maximizes flexibility and safety over a period well beyond the 2024?

MR. PALMISANO: Yes, we are. We're not looking for a 20-year decision or even a decision that assumes everything is gone by 2049. We will select a cask which has a design lifetime much longer than that. Has the ability to be relicensed. As the AREVA rep told us, picture it like your driver's license. I could drive for much more than five years. I renew my license every five years. Any cask is going to have to have a maintenance program to ensure the integrity of the cask, and any cask vendor is going to have to have the ability to monitor cask performance.

MR. PARKER: I think those factors that you just mentioned: The ability to monitor, the ability to maintain, have cost implications but I think they are inevitable given the probabilty that the DOE is going to be slow in making these decisions.

MR. PALMISANO: And I will tell, you know, we've been in the dry fuel storage since the mid '80s. And the industry vendors today understand they have to have those attributes in their designs.

CHAIRMAN VICTOR: Let me just make sure we get some additional comments before we break.

Jerry Kern.

MR. KERN: Just one quick question. In my experience in doing RFPs we have a set of criteria, we

send it out, and we request proposals. The other thing as we say: This is kind of what we want. You guys come back with the best ideas you have and we chose. So where are we on this? Are we waiting for the vendors to come up with a design that is acceptable or are we sending them a list of criteria that they have to meet?

MR. PALMISANO: We sent them a list of the criteria they have to meet. Okay. And, you know, the criteria we sent -- you know, we're considering a vendor that will not only supply the cask but expand the pad as well and provide some ancillary services.

So we've given them a list of criteria but with any vendor then they have the ability to propose additional things that they feel they could offer us that would be of value to us and we should consider, so that's certainly wide open.

Realize our choices are going to be limited to who has a cask that is licensed for storage and transport. We're not going to go out and pick a new vendor who's never designed and licensed a cask before and has no experience with it and pick a new vendor. So that's why we have the three vendors in play.

They all have licensed products. There are some differences in the ability to put it in San Onofre today versus more licensing work the -- you know, the range

is, quite frankly, a bit limited.

CHAIRMAN VICTOR: Can I just remind everybody that it's of course not appropriate for this panel to be making recommendations about vendors. But I do think, Tom, as this process unfolds if things come back from the vendors that you think are material to how the public would think about these that either share those with us or solicit views because I think there may be things that come back in the bidding process. Mindful that this panel should not be involved in any way in the actual bidding or the decision. So that's totally outside --

MR. PALMISANO: We'll take that in the spirit that there are things we should share with the panel because of the impact on the public.

CHAIRMAN VICTOR: Last comment, Tim Brown. And then I want to say one thing, and then we're going to break for a moment.

MR. TIM BROWN: Tom, I have a question, and I don't know if you could answer. But, you know, we've received material and it says, "Chose Safety Over Profits." And it seems to be a resonating thing that if we spend more money for a higher degree of reliability on any product and method or choice, that -- let me put it this way. Does SCE have a profit motive in cask selection?

Meaning, are you allocated a certain amount and if you come under the cost, you take the rest -- and I ask this question not facetious. I really want to know. Is there any motive in -- on your part, a profit motive in choosing say a certain cask over another or is all ratepayer money that is just covering these costs?

And lastly, you know, we could have a high degree of safety already and we're going to get .02 higher degree of liability by spending twice as much. I'm very sensitive to obtaining that .02 and spending twice as much of the ratepayers' money. So there is a point where it does matter, you know.

You know, I'd love to say that the government ratepayers have a check that they could just keep writing but ultimately I'm sensitive to the fact that we want to make sure that this procedure is cost effective. And so could you just kind of philosophically address that.

MR. PALMISANO: Sure. We have no profit motive in deciding what cask vendor to use or, quite frankly, and how quickly to proceed in decommissioning. This is all ratepayer money. The decommissioning fund has been funded by ratepayers. It is under strict oversight by the Public Utility Commission.

This is where our unit 1 experience comes in.

This is where Humboldt Bay and Rancho Seco -- or Humboldt Bay's experience comes in. Rancho Seco is not under PUC purview. And so this is the stewardship principle. We are sensitive to the fact that it's safety first. We need products and decisions that are technically correct, have the right safety margins in them, are licensable, and in the other criteria of stewardship or ratepayer funds. It is not our goal to do this as cheaply as possible.

CHAIRMAN VICTOR: And if I could just interject here. On table 2 of the draft suggests this is serious money. This is $400 million for the expansion of the pad and all the casks and so on. So money that is not spent of that ultimately gets returned back to ratepayers.

MR. PALMISANO: Right. Part of the overall decommissioning fund.

CHAIRMAN VICTOR: So could I just ask you one last -- make one comment and ask you one last question before we break. Which is one of the things we learned in the May 6th workshop is that it's just not always the case that having casks with smaller number assemblies are safer because you have less fuel there.

Because, in fact, the casks with larger numbers of assemblies also have all of the latest safety gear and

so on. And so I think that's something as we weigh and as the members of the panel make comments about this I think it's something for us to keep in mind that it's not -- there aren't an infinite number of trade-offs.

And, in fact, there's a premium on buying the latest gear and not doing things that require special reengineering and so for maybe smaller numbers of fuel assemblies precisely because there is safety in using the same kinds of casks that everybody else is using.

And working with vendors who have tremendous amount of experience in those -- in those casks even if that means higher numbers of fuel assemblies. That was just one of the things that really struck me from the May 6th workshop.

And the question I want to ask you is: Is it feasible to have two vendors? So right now you have the AREVA TN design, there's another design, which is underground, the Holtec design. Is it feasible to have both on site or is there a big premium on having only one kind?

MR. PALMISANO: It's certainly feasible to have both on site. This Palisades plant I referred to we had three different designs on site. The Kewaunee plant has selected their design for decommissioning, different than their design for the operational phase.

So a number of sites have mixed -- they have several designs on site. It is not -- it is certainly feasible. You just operate under each cask vendor's license. What it does mean is different handling equipment, different monitoring techniques.

So this is part of the evaluation that, you know, it was one thing in the operational phase when we naively thought the DOE would be taking the fuel out every five years. As we look at 150 casks for the longer term, one of the considerations is different designs, different handling equipment depending on which cask you're dealing with.

CHAIRMAN VICTOR: Great. Thank you very much. We're going to take a 10-minute break. Then we're going to have the public comment period. Let me just mention that there are 23 registered comments for the public comment period, so that's going to be a very, very tight schedule.

Thank you very much, Tom Palmisano. Thanks to all of you. We will reconvene in 10 minutes.

(A break was taken from 7:36 p.m. to 7:37 p.m.)

CHAIRMAN VICTOR: First off on my list -- as before, the comments are going to be made from the podium here. We've got a count down clock set for three minutes that everybody could see.

And, Marty, the floor is yours.

MARTY MAGDIF: Thank you. Marty Magdif from Laguna Beach. Thank you for all of your time. We did just have Senator Boxer let us know that the Nuclear Regulatory Commission condition is now set on accident. By any kind of manner to our spent fuel pools at SONGS gives us ten hours before we're in trouble.

I think that the public knowing that would be terrified. And I was glad to hear that they are looking at a new system for the spent fuel pools so that it's not off the ocean. And I'm glad that's happening, and I hope it happens tomorrow. My biggest concern is that we continue to say Department of Energy, they haven't done anything since it began the problem in 1987. And we just can't wait.

You talked about a California solution. You say that there are laws that will stop it. Senator Feinstein's bill right now is in committee, which means it's locked there and is not moving very fast away. And that's the S.1240, that's the Nuclear Waste Act of 2013 that might help us get what we need to move the fuel. But it's sitting there.

California must -- you as a panel, please put together people at all political levels, federal, state, and city here in California and begin to get the laws

changed that we need to move this fuel off the ocean. We've got every reason to believe that we could be Fukushima tomorrow.

We watched the firestorm right at Camp Pendleton with a dozen employees evacuated. We cannot leave it where it is. And I know you have terrible decisions to make. When you talk about building it, tripling it where it is. I'm understanding we don't want it to sit there longer than it has to. Terrible decisions.

But you're also planning to not make the equipment that moves it out of there, and I want to see us having the equipment there that moves it out. I want to be planning it and have it all out of there in five years, yesterday. I want it out. So thank you for how hard you're working.

I know we have to be realistic and you are moving fast. I did want to ask that we do ask for a green field solution. And -- is that my time up already?

CHAIRMAN VICTOR: No. You've got one minute. The timer is more fantasy than reality right now.

MARTY MAGDIF: So I'm hoping not. All right. Thank you.

I'm hoping we have the green field solution, Mr. Rannals, to make sure we have this cleaned up completely when they leave. And I am wanting to make

sure that we do have the handling equipment.

You talk about that we have unit 1 cask 17 canisters that have been there now since unit 1 was decommissioned. Can they be opened? Can the pieces be moved out? If they -- we should be able to check that. And if that can't be done, then we need to be planning for the canning right now before you buy the canisters so that some day, 100 years from now, 200 years from now, Chernobyl right now is spending over a billon dollars for its cask -- it's cement after just 28 years. 28 years and another billon dollars to redo the cement that covers them. So thank you.

CHAIRMAN VICTOR: Thank you very much.

MARTY MAGDIF: Have a final solution, California.

CHAIRMAN VICTOR: Thank you for your comment. Yoka Kohn and then Joe Holtzman.

YOKA KOHN: My name is Yoka Kohm. I'd like to talk a little bit about the Fukushima Daiichi Nuclear Power Plant. Dr. Parker, you mentioned about that the tsunami -- because of the tsunami hit that caused the accident. Actually, the many documents show before that tsunami hit with that earthquake that it released the radiation.

So that accident happened before the tsunami hit. I think all the panel people here have tremendous

responsibilities not only for the client residents of Southern California but also to the many generations ahead. That this discussion that we've been having have enormous impact for our future.

So I'd like to ask all the panel -- panels here to study about the danger of nuclear power and radiation. Please listen to the people who have studied and alarming the danger. I studied about high burnup fuels and have some question. I asked the person who used to work at Fukushima Daiichi Nuclear Power Plant in Japan.

Yes. That people, Daiichi Nuclear Power Plant. He used to work there for about 20 years and knows a lot about nuclear power plants as well as spent fuels. He told me that Japan once considered using high burnup fuels. And he researched about it but they gave up. The reasons are because of those high burnup fuels extremely radioactive and not easy to manage.

And he describes those as combustive. And they need to be in the cooling pool for more than 20 years. Do you know that Japan has MOX fuel that contains plutonium and very dangerous fuel. Also Japan is still trying to operate high speed Breeder reactors that U.S., France, and England all gave up. And even from all the researching.

Japan gave up on using high burnup fuels because

they think those are too dangerous to operate. That's we have here in San Onofre. I have many questions about safety over the plant. The decommission schedule charts show that they will finish the storing spent fuel into dry casks by 2020. Some 2015.

I really concern about the length to storing those spent fuel in the pools long enough. Also, because I studied about high burnup fuel is twice as radioactive and need to be in the cooling pool at least 20 years.

CHAIRMAN VICTOR: Thank you very much for your comments.

YOKA KOHN: Thank you.

CHAIRMAN VICTOR: Next is Joe Holtzman and then Ace Coughman.

JOE HOLTZMAN: Yeah, Joe Holtsman, Mission Viejo, 17 miles from ground zero. You know, Tom mentioned the three things about safety, stewardship, and engagement. I hope this panel truly understands that we wouldn't be here if two out of the three had been complied with here.

You know, after attending meetings about San Onofre for 10 years, I'd like to share with you that there have been health and safety falsification by Edison. There had been miswiring of generators, certainly misdesign of generators, questionable repairs

of the dome, purposeful falsification of customer satisfaction surveys.

And really, in my own words, I'd say it's not in Edison's DNA to be honest. Let's go through a couple of things. Mother Nature has no rules. Now, I served as a secretary/treasurer of the Mission Viejo Heritage Committee for a number of years, so I know this area pretty intimately.

When the 1812 earthquake occurred which took the mission down, the Good Fathers, the Franciscans reported the water came in one and a half to two miles. Now that mission is three miles from the water. So we've got a break wall out here protecting this plant that certainly would be overcome.

It's not the moments of force, Bill. It's not the moments of force on the building. It's the tsunami that's going to result that's going to bury the place. So don't worry about the earthquake. In the results of things that come later. Now, after 45 years of industrial experience, I would like to share something else with Tom.

You don't have the expertise in this world that's going to be needed in the period that you're talking about because there is going to be other plants that are decommissioned. We had 104. We're down to 100. The

rest of the world is decommissioning. After launching five major airplanes and about 15 different major automotive launches, I know what it takes in resources to be able to accomplish this stuff.

You've got an aging nuclear fleet Navy and that's where your resources come from, the nuclear Navy. They're downsizing also. So you don't have the intellectual capability and the intellectual capital to be able to accomplish what you're doing. So we got a real problem on our hands. And I think you got to challenge everything that comes up. Thank you.

CHAIRMAN VICTOR: Thank you very much for your views. Ace Hoffman and then after Ace Hoffman Christine Johnston.

ACE HOFFMAN: Thank you for the opportunity to speak. I feel like it's September 10th, 2001 because we're completely ignoring the possibility of an airplane strike against the dry casks and they're not going to withstand that.

If we pile them all up together and we don't put solid earth and berms, there's a risk of a problem (inaudible) 370 might be controlled from somebody outside of the country to crash into that plant. Is this really what we're here for? Is this kick the can down the road and say, oh, we're going to have a storage

unit somewhere in 20 years.

Well, you have nothing to go on. Absolutely nothing to go on to believe that that's actually going to happen. The problems with the Yucca Mountain were severe. It was not just a political problem. Why is it that in every decision for the nuclear industry we decide that something is good enough and the cost effective.

An extra million dollars for each to can the fuel. How much -- Tim, you said what were your exact quote -- you said .02. You don't want to spend an extra .02. Is that percent? That's awful cheap compared to the costs --

MR. TIM BROWN: It's a sample figure, Ace.

ACE HOFFMAN: But compared to the cost of an accident. What do we have here? We're on cycle 16 for both the reactors so we have what may be ten full reactors' worth of fuel from each of them in those spent fuel pools.

You don't want anything going wrong. That's the most important thing is to cut this Gordian knot. And if you keep saying, well, somebody else is going to take care of it so what we need is a cask that is going to last 10 years, 20 years, 50 years. That's not going to be good enough.

We need something that is going to last, oh, really for thousands of years. And if we can't do that, we need to admit that we're not doing enough in terms of protection from tsunamis. There's going to be an under water earthquake off shore that causes a collapse of a mountain like what happened at Banda Aceh. And that could cause an earthquake -- a tsunami that is just enormous.

And we're not even considering the possibility. We're not doing anything about stress corrosion craking from the salty air. Any of us that walk down on any of the boardwalks know how much rust can occur. I went through all the literature I could find on 316. And it rusts. Everything rusts, even 316.

They're all going to fall apart. So we need to come up with some plan that is better. And I think the most important thing that we could do here is to prove that it's going to cost so much money that the other reactors -- Palo Verde of which Southern California Edison is a part owner, they may have been able to replace their steam generators but they are going to have a problem with spent fuel just like us.

The only reason theirs will be less than ours is because they are further away from the ocean. They will have less rust from that. Diablo Canyon, let them know

how bad of a problem we've got here. How many people do we need to solve it?

CHAIRMAN VICTOR: Thank you very much. Christine Johnston and then Sharon Hoffman.

CHRISTINE JOHNSTON: Hello. I have actually four questions and I don't know if I could direct them to anyone in particular. But on May 15th, of course, we had the fire. And I'm five miles ground zero from your plant.

I wanted to find out if hazmat was called in on May 15th in anticipation of the photograph that I have, an aerial photograph, that indicates the fire was basically approximately a half mile from the actual plant coming straight down through trail 1. And also -- so that is my first question. Was hazmat called in?

CHAIRMAN VICTOR: In this period of the meeting, why don't you raise the questions and then we will find ways to get answers back to you.

CHRISTINE JOHNSTON: Okay. Good. I have a total of five. My second question is: The rods, of course, have to be constantly cooled and if electrical power systems were interrupted by the fire, I understand that you have a four-hour capacity with which to regain or you have four hours of electrical ability to make certain that the pools can remain cooled.

And if it were interrupted, that would be -- I would like to find out what exactly would that involve in terms of a diaster. Or what magnitude of a disaster we would have.

My third question is: How many people were evacuated on May 15th from SONGS? And I would also like to know what percentage of people from SONGS were left behind? And how many employees were left behind to manage the plant and safety? And as safety is your top guiding principle, that's very important for, I think, all of us to know.

And then finally as someone more in the area of fire protection could maybe discuss fire natos and how those particular types of events touch down unwittingly and unknowingly and very likely could at the plant. That's it. Thanks.

CHAIRMAN VICTOR: Thank you very much. This and other questions that will arise I'll say a few words about that at the end of today's meeting. Next is Sharon Hoffman and then Darren McClure.

SHARON HOFFMAN: Good evening, my name is Sharon Hoffman, and I have been to the three meetings that this panel has held so far. And it is my intent to try to attend as many of these as possible. One of the things that I'm hearing that I find extremely disconcerting is

I hear the panel saying we think we have answers or placate trying to say this is under control.

We know how this is going to work. There were a couple of very obvious instances of this this evening. And I really want to urge all of you to continue to question. People have been trying to solve the problem of nuclear waste since the dawn of the atomic era, nobody has come up with a solution.

All the solutions that we're hearing are stopgap measures. Nobody reports to have a solution that will last the half life of even the shorter lived isotopes, let alone things like plutonium. So when people say the dry casks will last much, much more than 20 years, first of all, we don't know really because they haven't been around very much longer.

And secondly, how much longer and what are we going to do when they do fail because I don't think anybody thinks they are going to last, say, 24,000 years. So what is the plan for safely unloading and restoring that fuel? Particularly if it's not canned and therefore could be a pile of rubble at the bottom of the cask.

Similarly I found the discussion of the difference between the Richter Scale and the ground acceleration really kind of confusing because it started by saying

these things are very different and the Richter Scale makes no sense. And then it proceeded to compare Richter Scale earthquakes and their effect on something 55 miles away in Japan with a Richter Scale earthquake from the San Andreas Fault which is 55 miles from San Onofre.

Either they are comparable or they are not. And if they're not, then other things like the geology make a difference. And we need a broader answer than, oh, okay, now we understand everything is fine. And since we're only 55 miles from the San Andreas Fault, there will never be an earthquake event at San Onofre. Thank you.

CHAIRMAN VICTOR: Thank you very much. And Darren McClure is next and then Jeff Steinmess. Darren McClure. While Darren is taking the floor, I just want to say this. Bill Parker was asked to give a brief summary of a larger piece of analysis that he's done and I will circulate that to the CEP and we will post that material on the website. So the purpose was not to run roughshod over the Richter Scale, but to summarize a more complicated analysis.

The floor is yours, sir.

DARREN MCCLURE: Good morning [sic], gentlemen. Here we are at the beginning of this and I have also

been to all three of these meetings so far. It's good to see our mayor back and in force here today. Gene Stone and Chris Thompson. I have a question about Aesop's Fables.

Have you guys heard the story of the Boy who Cried Wolf? On the 14th as the fire was burning in San Clemente as people were being evacuated from Marine housing just south of Basilone Road, as people were being evacuated from the nuclear power plant, Southern California Edison continued to test their emergency sirens.

Is that smart to be doing during an evacuation, during an emergency? Could we have done something a little better with that? Thank you.

CHAIRMAN VICTOR: Thank you very much. Next is Jeff Steinmess and Donna Gilmore then Roger Johnson.

JEFF STEINMESS: Hi. Thank you for hearing us today. I'm sorry to talk a little bit more about the earthquake thing. The situation with the ground acceleration I also had an issue with. I understand that he actually has provided a more detailed information about it.

But one of the things you gotta understand about ground acceleration here in California with respect to the Northridge earthquake, which was a blind fault, that

means nobody knew that it was there before the earthquake. That earthquake had ground acceleration in excess of .67. Okay.

What that means is that there is no real good way to predict where an earthquake is going to take place, how strong it's going to be, or what the ground acceleration is. It's this far from conjecture. When you have blind faults and you don't know where they are at and they exceed your built parameters, you're just hoping for the best. Thank you.

CHAIRMAN VICTOR: Could I just ask you since you have you more time? It is your contention -- could you stay up there for a second. I just want to ask an implication of your question. Is it your implication that we think there could be blind faults that produce 1.5G or greater acceleration or is it just the general point of that blind fault?

JEFF STEINMESS: The 1.5G is related to the pad. It's not related to the pools. So my contention is not related to the pad.

CHAIRMAN VICTOR: So the implication --

JEFF STEINMESS: What I just specified was in relation to the pools they are in now and also the information that Mr. Tom Palmisano had mentioned.

CHAIRMAN VICTOR: Okay. Great. Thank you very

much for that. So Donna Gilmore and then Roger Johnson.

DONNA GILMORE: I'm Donna Gilmore. I live in San Clemente, and I'm very concerned that not enough is being done and not enough people understand the science, the engineering. For example, Per Peterson was at the workshop and said that after the fuel goes into the dry cask that there is no problem with it breaking down any further, the cladding.

Well, Marvin Resinkoff and I e-mailed him some information from an engineer of science called Bill Young that states the opposite of that. And he -- Per was good enough to do a reply all to many of the people on that e-mail list that he said, "Donna, you're right."

Okay. Now, that's good and that's bad. I'm glad I'm understanding things but it's really bad that he didn't know and he's on the Blue Ribbon Commission that is recommending our future. And unfortunately I'm finding there is a whole lot of things that people don't know and I'm very disturbed that I'm learning more than the people I'm supposed to go to as the experts.

So we really do need to take a hard look at this. We need to can the fuel because nobody freakin' knows what the heck it's going to do and how soon. Bob Isenger (phonetic spelling) at the NRC will only license for 20 years for dry cask. There are people that are up

for high burnup renewal that are overdue.

They haven't been relicensed, Prairie Island for example. This new 32 assembly cask it appears as though you can't even have damage fuel cans in those casks from the way I'm reading the specs, but I would like to be able to talk to somebody who is more familiar with this to see if I'm interrupting it correctly. I'm just not sure, you know, who that is.

But I'm -- I would just like to be here to help solve this. I mean, we're all in the same boat here. I don't want this to be contentious. I want to work together, but I don't want to have our things dismissed out of hand when I'm finding that my information is better than these, you know, gold standard experts.

It's kind of scary. So if there is any information on this handout that you think is incorrect, I will fix it. The 32 assembly cask has me really worried because it looks like they have illuminated the ability to hold damaged fuel cans, which I think is going to make us even less safe.

And shoving 32 fuel assemblies in a space that currently houses 24 just seems like it's going to make the problem worse. And I know Edison has submitted a request to the NRC for those 32 assembly casks. That they said that they wanted to be able to use them by

September. So is that -- is that letter no longer valid that you submitted to the NRC? So anyway, I have a whole slew of questions, but I'm out of time.

CHAIRMAN VICTOR: Thank you very much for your comments. And just for the record, the handout you're referring to is the handout entitled "Choose Safety Over Profits," which is about the casks and the e-mail traffic with Per Peterson as part of the package of materials that I circulated to the panel in advance. I'm going to ask Per for some clarification because I'm not sure that that exactly was the intention of his reply, but I will get that clarified by e-mail.

Next on the list is Roger Johnson then Jennifer Massey.

ROGER JOHNSON: Good evening. In the time that permits, a couple of troubled issues that occurred to me. First one was about safety. And I didn't see that discussed very much tonight other than lip service. When the thought was brought up about putting -- you're going to spend $400 million building a new storage plant.

And it couldn't possibly be put on the Mesa because then we would have to two police forces. Well, why not safety? Safety is much more important. I don't care if they have five police forces. If you take it

out of tsunami range, you take it out of public access, you make it more difficult for the terrorist to reach. That's a huge advantage.

And I don't care how many police forces you have to have. Safety comes first. Not the number of police forces. Another thing is I think if you're making long-range planning, I think you need to have your estimates as accurate as possible. The idea of having a 2024 national repository is totally unridiculous [sic]. I see that as a public relations gesture.

And I don't think that should be in there at all. If you started tomorrow morning, it wouldn't be ready by 2024. Think how long it took to work on Yucca Mountain and it's still not -- was never finished. So I think the public should never be made to believe this stuff is going to be out of here by 2024 or 2029. That's not going to happen.

And that means you need to seriously consider a whole lot of things like recasking. And those casks are not going to last forever and you relicense them every so many years. But they're going to fail. The ones at Three Mile Island have failed. Some of them are leaking already. And we have to plan for that.

And so putting these in the worst possible location between a highway and the ocean and spending a

lot of money on it is to me very poor planning. I see a lot of planning for keeping all the waste right at San Onofre. I see very little planning going on on how to get it moved out of here. And that's the number one thing. Safety is the number one thing. That means the number one thing is get it out of here. Thank you.

CHAIRMAN VICTOR: Thank you very much. Next is Jennifer Massey and then Ray Lutts.

JENNIFER MASSEY: Yes. Good evening and thank you all for being here. Yeah. I've been living for 33 years five miles from ground zero and I'm quite unaware of what was going on down there until Fukushima. And I hope you all can help us. Dr. Parker stated earlier this evening that earthquakes in California are typically 8 on the Richter Scale.

My understanding is that San Onofre was designed for no greater than a 7.0 earthquake on the Richter Scale. Maybe Dr. Parker could then explain why he feels we shouldn't be concerned about an earthquake at San Onofre. This past week the fire came within a half a mile of San Onofre.

Had the winds been unfavorable, sparks could have ignited the open pools full of radioactive spent fuel equal to -- I read in, I think it was The New York Times 1,000 Hiroshima bombs. This -- the waste must be moved

immediately. We can't wait for a permanent repository.

You folks up here on the panel, your legacy -- your legacy to Southern California is to rid Southern California of the nuclear waste. And, and, and treat the ratepayers fairly. Thank you on behalf of future generations who won't forget you either way you go. They will either thank you with great gratitude or eternal curses of the dead and dieing.

CHAIRMAN VICTOR: Okay. Thank you very much. Next is Ray Lutts and then George Allen.

RAY LUTTS: Thank you very much. My name is Ray Lutts. And I'm with Citizens' Oversight at citizensoversight.org. We do participate at the CPUC as a party in their official proceedings which is a regulatory agency that regulates this firm. Number one, the canning technology was mentioned tonight. It was mentioned by AREVA that it was not a safety measure.

Gene brought up that maybe it did have some safety elements to it. I would suggest that maybe we should consider canning technology that's different that does have safety elements to it such as complete enclosure of each -- each assembly such that one assembly disintegrating would not propagate to others and create a real disaster.

Siting options, we talked about some siting

options but nothing in detail. We need to get into some detail about the siting options at this facility including at the Mesa area possibly using the subterranean tunnels that they have and the subterranean areas in the Mesa area.

I don't know if you could get under the freeway using those tunnels or not, but I think you can. I just don't know because that stuff isn't very public. I want to make the request that the draft of the Irradiated Fuel Management Plan be made public immediately. There is no reason to keep this stuff private.

The fire on May 14th, why did the staff not shelter in place? It seems like a pretty safe place to be. Hopefully the plant would not start to burn.

Description of why the fuel was loaded into the cannister. I want to see a better description. How do they load it into the cannister? How do they get the water out? How do they take end panel off? Nothing has been described yet.

We are still absolute beginners on earthquake technology. Plate tectonics was first described in 1965 through 1967. You think that several decades really means we know about earthquakes. Absolutely not. We know nothing.

So to come in here and say that we know how much

the ground is going to shake and things are going to -- everything is safe is ridiculous. Funds -- those funds that are left at the end of this decommissioning, we don't get those funds back until absolutely all of the irradiated fuel is removed.

How long will that take, centuries? So that money will sit there. So we need to figure out a way to get the money out when the first part of the decommissioning is completed. I'm going to send you a letter on the details on those things. Thank you.

CHAIRMAN VICTOR: Thank you very much. Next is George Allan and then Glenn Cross.

And let me say that because the issues of fire are both front of mind and relate to some fuel management questions, I'm going to ask at the end of the public comment period for Tom Palmisano to make a brief comment on the fire issues and the particular fire integrity of the fuel. Because I think we should not leave here tonight without having heard from him some materials that have actually already been circulated to the CEP.

George Allan.

GEORGE ALLAN: Yes. I'm George Allan. I happen to be a radiation protection worker at San Onofre. I tune up the instruments that measure radiation. I have been involved in some -- putting the canisters into the ISFSI

pad, into the NUHOMS cement housings. The first thing I wanted to explain was those rates -- we do perimeter surveys.

And those rates are background on the ISFSI pad and at the spent fuel fence. The NRC regulates us to give you, the public, one one-thousandths of a chance of cancer or accident. They say in the normal world you will have some source of radiation or some source of accident or cancer.

We give you one-thousandths of an additional risk to your life from our plant. And we live to that goal. So anyway, Ms. Boxer had kind of an incendiary comment saying that these spontaneous ignition of this fuel could happen if we have an electrical fault. Our plant we have 105 hours to get to even 200 degrees.

And studies that she has shown that we referenced when I looked up her letter, at our age of our fuel it's two and a half years old it would take 11 days to boil down to three feet above the pool -- above the fuel.

And after that they have 10 hours to 24 hours to get water in the pool before you have -- if the fuel is uncovered in air, then it could ignite after 10 to 24 hours. So to be a spontaneous ignition that's a misleading statement. So basically two weeks plus 10 to 24 hours of being exposed then you might have a

zirconium fire.

So anyway to explain what that is, and Tom, I'm sure, will give you more. And I happened to be there during the fire. I'm not an Edison spokesman. It was in the campground. It was a brush fire. It was just a brush fire. But our plant did help.

So anyways, three things did not happen at Fukushima. They did not have a spent fuel pool leak, their ISFSI canisters were intact and no one died of radiation sickness. So anyway, I just wanted to explain we're pretty safe down there. The plant has strong barriers to terrorists, earthquake boundaries. We have strong, wide cement walls to protect against a pool leak. So anyway, I just wanted to give a little different view of San Onofre.

CHAIRMAN VICTOR: Thank you very much for those comments. At a later meeting of this panel, probably in the fall, we'll deal with emergency preparedness questions.

Next is Glenn Cross and then Carl Allenger. I think I may be mispronouncing your last name, Mr. Allenger.

GLENN CROSS: I'm Glenn Cross. And I just wanted to comment that, Tom, you're kind of the key man here, Tom Palmisano, and I notice that you aren't on the list

of the people that are going to be at the head table. I admire your courage for coming here tonight especially since your fellow panel members didn't see fit to give you credit.

You also have experience in decommissioning. I think that's what's missing here. I've got some experiences I told with the SONGS project. We're the ones that were responsible for the shutdown of SONGS. And my comment for the benefit of the young lady from Japan that Mitsubishi Heavy Industry were the folks who manufactured the four steam generators and their design on the tubing in those steam generators is what failed.

So I would comment that there is a lot of problems, there's a lot of problems with management. There is a lot of management -- of problems with technicians. We've got problems in the United States right now with competence. We've got guys here from the union.

There are guys here from the labor union and the union representatives. I got to give credit to these guys because they are working around this radiation that everybody is afraid of. The fellow sitting next to me down here was telling me about how risky it is to work around radiation.

I've got to tell you that guys have worked at

SONGS for years. Guys have been monitored for radiation exposure. Hell, physicists have worked down there. Those guys have not died. There have been people who died at Fukushima. The manager in charge of a lot of the folks from the Fukushima plant ran to the other plant. It was closer to where the offshore seismic event occurred. But I got to tell you that we're working with the limits of human beings. I'm a veteran. I'm a Vietnam veteran. I'm disabled. I got to tell you that the Veteran's Administration has problems. Healthcare in general is going to have problems.

Because it's all going down to even more complicated than the Veteran's Administration hospitals.

So I give credit to Tom Palmisano. I give credit to the representative of the union. I give credit to the guys who are working at the plant. And I would assure everybody here who is just as concerned as I am that we've got it in the hands of competent people.

I give all of you credit for being a part of the oversight and especially to the CPUC who are working in conjunction with Tom Palmisano to make decisions. I have in my own mind confidence in the capability of Palmisano, his engineers, and the other schedulers from SONGS.

I believe that everybody here is well intentioned.

I believe everybody in the audience is well intentioned. But I got to tell you, do not overreact to nuclear. Nuclear is a proven concept.

CHAIRMAN VICTOR: Thank you very much for your comments. Carl Allenger, please. And then Toby Garret.

CARL ALLENGER: Thank you all for the professional work you appear to be doing here. And I don't mean that facetiously. This is the first San Onofre meeting that hasn't made me angry. And I'm still very concerned about the situation.

I'm a concerned citizen of Fallbrook, which is 14 miles from SONGS. As you no doubt know, we started our fire season with a bang this year. Three of those fires were on the grounds of Camp Pendleton, which like Fallbrook is the plant's closest neighbor. No disrespect to our military but that expanse of chaparral across Pendlton makes it an extremely fire prone neighbor experiencing several major fires each and every year.

Of course we all look forward to this hot waste leaving our community completely but while this volatile liability is not in dry cask storage, for example, for the next seven years we should not fail to respect that active cooling powered by off-site power is still a critical matter to keep those waste pools from going

critical.

And I appreciate the gentleman's statement here just a little while ago who said we have 11 days. That would be a nice thing for San Onofre to put in writing and explain to the public so they understand that we're not in a four- or eight-hour window. That we are actually in a state where 11 days of no power to San Onofre would not cause a problem.

If that's not the truth, then let's talk about what the truth is because post Fukushima everybody is still very concerned in this community about where San Onofre has left us.

Final point if I understood the point about cooling redesign and that you must recreate the cooling units of units 2 and 3 as part of decommissioning, I urge you to use the most comprehensive safety backups including better backup generator placement and batteries.

In other words, many years ago this was our design and this was our sea wall and this was our possible threat of tsunami. If you are in the middle of making changes to that cooling system during decommissioning, I urge you to consider improvements rather than status quo. Thank you.

CHAIRMAN VICTOR: Thank you very much for your

comment. And I think some of what you asked for in the islanding systems will be in the next draft of the plan and the materials shared with the CEP.

Next is Toby Garret and then Jason Carter.

TOBY GARRET: My name is Toby Garret. I'm with the Ironworkers Local 229 out of San Diego. I didn't really know this was going to be about the fuel rods, all that kind of stuff. I was more -- we're here to address the dismantling of the actual structure.

And I think that talks more to what Chris Thompson was saying it's a financial thing. Financially speaking if you want to come in as financially feasible time wise, you want professionals and we're the ones that do that work. We're the ones that take the steel apart, we erect it, we take it apart.

We saw it at 9/11 when those buildings came down, the first responders showed up. They were looking at a pile of rubble. They didn't know what to do. Who did they call? They called Local 40, union ironworkers in New York City and they came in and took stuff apart in a safe manner.

Yeah. You get people in there that aren't trained to do this work you're going to have much more injuries, deaths, and damage to property which is going to push your bottom line through the roof. From what I heard

Mr. Parker say it sounds like these fuel rods being put into these casks is much safer than where they are at in these fuel pools.

You have a failure of electrical systems, mechanical systems, that might cause a meltdown. They're in static storage. Sounds pretty good. I hear everyone talk about getting it out of here. Move it to where? Move it to another state? That sounds like picking dog poop out of your backyard and flinging it over the fence into your neighbor's yard. That don't sound very neighborly to me. Thank you.

CHAIRMAN VICTOR: Thank you very much for that image.

Jason Carter and then Gregory Dawson. Are you Jason Carter? Oh, okay. Gregory Dawson and then Caesar Carrara.

GREGORY DAWSON: My name is Gregory Dawson. I'm also a member of the Local 229 ironworkers. I am happy to be before you guys today, and I appreciate you guys giving us the opportunity to listen to the things that are taking place here and I'm -- we appreciate the opportunity and I don't have any questions or any comments further at this point in time. But I wanted to have the opportunity so I do thank you for your time and concede the rest of the time to the panel.

CHAIRMAN VICTOR: Thank you very much. And thank you for you and your colleagues coming tonight and showing interest in this process. It's much appreciated.

Caesar Carrara. And then Daniel Dominguez.

CAESAR CARRARA: How are you guys doing? First thing I want to do is thank Tom for the great presentation you gave up there. I watched my father build this place back in the day. I'm second generation ironworker. My son is a third generation ironworker. I'd love to see my son come out here and dismantle this place.

The only bad thing about that is, you know, this place has retired ironworkers. And it has put a lot of families to work and has given livable wages and work. We're getting rid of it. That's hard to see. But Edison, their safety that they have is immaculate. You know, we've had a lot of ironworkers out there working, working hard, working safe.

Never had any issues. I think they're going in the right direction. And the way they're looking at things, they're going to do the right thing. And we're going to get rid of these rods and we're going to put things away safe. And make sure -- I mean, if they take care of the workers, I mean, it's one of the safest

places I've ever seen in the construction world. And everything they are going to do -- if they do that for the workers, imagine what they are going to do for the citizens outside. I believe they are headed in the right direction and they are going to do the right things. Thank you.

CHAIRMAN VICTOR: Thank you very much for your comment. Daniel Dominguez and then Robert Alvarez.

DANIEL DOMINGUEZ: My name is Daniel Dominguez, and I'm the chief officer for the local union that represents the operations, maintenance, and technical workers, and clerical workers at SONGS. There's about 110 of us left, 120. I just want to take this opportunity to introduce myself to the panel.

My background is I worked at San Onofre for 32 years, 25 of those years as a reactor operator. My wife works there. She is a senior reactor operator. Both of us live in Oceanside, and we -- I would like to offer our help or our advice or whatever you want to call it from a worker's perspective.

I'll tell you that we have operated that plant since 1968 starting with unit 1. We have operated -- all our members are highly trained, highly skilled, dedicated workers. We -- even though we've shut down, our commitment to safety has not changed. Everything

from the day we started our primary responsibility is the health and safety of the public. Protect the health and safety of the public. Even though now we're decommissioning or in the process of discommissioning, our responsibility has not changed. It's to protect the health and safety of the public. I spent Sunday and part of that responsibility I was on shift working, monitoring the spent fuel pool and I have computers that monitor that, monitor the temperature of the ISFSI.

I think it was mentioned the ISFSI is kind of -- is a passive system. I'm still required to go out there and walk around. So I spent Sunday walking around the ISFSI pads, taking -- checking pool levels. And I will tell you that, you know, with respect to the safety and the concern the people have about fires and all this, I will tell you that Edison and our union, our workers take a responsibility to protect the health and safety of the public very seriously.

And we would not tolerate or do anything to jeopardize that safety. I don't -- there was some mention about the fire. I was here the day of the fire. And the I heard the PA announcement. They did an evacuation of the storage building, but it was just a precautionary evacuation.

I think a handful of people were evacuated.

Nothing burned. There was no components that were jeopardized, the safety of the fuel or the spent fuel pool in that building. So with that, again, if I offer our services or advice if the panel is so inclined to do so. And again, thank you for the opportunity to speak.

CHAIRMAN VICTOR: Thank you for your offer. Thank you.

Robert Alvarez and then Beverly Finlay Koneco.

Mr. Alvarez.

MEMBERS OF THE PUBLIC: He's going to pass it looks like.

CHAIRMAN VICTOR: Beverly Finlay Koneco, please. And then after she speaks Madge Torres.

BEVERLY FINLAY KONECO: As I mentioned at the last CEP meeting, I'm working on an oral history project about Fukushima. Some of our interviews air regularly as a feature called Voices of Japan on a weekly pod cast. This week we featured former Mayor of Futaba Town, Katsutaka Idogawa. As host to the Fukushima Daiichi Nuclear Power Plant the town of Futaba suffered devastating harm.

I want to share what he has to say today because I was very disturbed by one of the local political leaders, Mr. Brown, on this panel -- his performance on this panel at the last CEP meeting when he brandish the

shiny PR notebook provided by SCE and praised its content challenging the concerned citizens sitting before you to come up with something better.

Here's part of what Mayor Idogawa has to say. "Three years have passed already. The feelings of regret and frustration caused by the deplorable circumstances of March 11th, 2011 continue even now. What is most frustrating is that the government and TEPCO promised us that the nuclear power plant would not cause an accident.

"As mayor I sat in my office with those people over the years and discussed the possibilities of an accident occurring. Did they tell the truth? They always said, Mr. Mayor, don't worry, an accident will definitely never happen. Well, the nuclear power plant broke down pretty easily in the earthquake and tsunami, didn't it? The operation of nuclear power plants was based on a lie.

This accident is proof that nuclear power is an incomplete technology. Furthermore, the nuclear power plant destroyed our town. The town is a public entity. A privately owned for profit utility corporation destroyed a public body, our town." The interview continues but that is all I have time for.

We essentially have a nuclear waste dump sitting

on our shore here in Southern California. Taking the utility's promises at face value can prove to be reckless behavior. Our nation does not have a good track record in dealing with nuclear waste as demonstrated by the messes at Handford in Washington State and the Waste Isolation Pilot Project in New Mexico, which is shut down currently due to an accident.

I would urge you to research the situation beyond the packets that Edison is giving you. You could go to sanonofresafety.org or could go to The Nuclear Information and Resource Service, The Committee to Bridge the Gap and The Union of Concerned Scientists. Finally I would like to recommend to everyone on this panel that you read David Lochbaum and Edwin Lyman's book Fukushima, A Nuclear Diaster. You'll learn a lot about the NRC.

CHAIRMAN VICTOR: Thank you very much for your comment. Just to clarify the record, the situation -- the incident you referred to -- or event you referred to was concerning transparency to this panel when Vice Chairman Brown held up the book as evidence that, in fact, the panel in the process has been very transparent. I'm sure we could do better. But just to clarify the record that that was the situation to which you're referring and you could certainly check the tapes

on that.

Madge Torres and then Gahal Kurnihan, please.

MADGE TORRES: Hi, I'm from Carlsbad. My name is Madge Torres. High burnup fuel takes much longer to cool than the previously used fuel. For that reason, I think it's important that we have a means to measure the temperature of the high burnup fuel to know when it is finally safe to put in a dry cask storage.

Tests should be done ahead of the storage to determine the differences between high cask -- high burnup fuel and the previously used fuel. We don't want to rush to dry cask the high burnup fuel. Once high burnup fuel is in storage, it is more difficult to monitor and cool. Give the time the high burnup fuel needs to cool sufficiently before you store it in dry casks.

CHAIRMAN VICTOR: Great. Thank you very much for your comments. And let me just reiterate that Gene Stone and other members of the CEP are going to be working with a variety of folks on these calculations. And I'm going to personally oversee that process to make sure that we're as transparent on that as we can be.

Gahal Kurnihan and then Steven Van Wagner.

Can you reset the clock, please. Thank you very much.

Please, sir, the floor is yours.

GAHAL KURNIHAN: First of all, I want to thank you for the work that is very important and not necessarily particularly joyous. In fact, I would say that it was difficult and sometimes terribly depressing, but I commend you for what you're doing and I hope that you will stay with it.

And I'm also pleased to see representatives of the cities here. One of the things that I'm very concerned about because I can agree with almost all of the things that have been brought to as concerns tonight. One of the things is just a little history of the four -- for people that are trying to deal with the problems you're dealing with now.

I'm thinking particularly of what happened at Santa Susana, my God, that is still going on and not completely resolved. And (inaudible) of people and other lawyers and scientists and so forth for decades they've been trying to find a solution so they could really put that to bed.

And I guess maybe some of them feel they have by now. But I think it's very important that you have made a commitment and you're this far along and a very hard and often I would say discouraging thing. I just think that in terms of the past of bodies like this -- and I

think all these mayors, they got a lot of problems. This is one more they don't need probably.

But I'm glad you're here. I'm glad you're doing this. All I'm saying is let's make history. Let's make this body somehow through prayer or whatever else it takes able to bring closure.

CHAIRMAN VICTOR: Thank you very much for your inspiration on that. That is certainly our hope here. Thank you for your supporting comments.

Steven Van Wagner and then Venad Aurora.

STEVEN VAN WAGNER: My name is Steven, and I am a citizen of San Clemente. And I do think we owe a debt of thanks to the technicians and steelworkers who did make this SONGS run fairly well since 1968. Now, I'm sure they didn't have anything to do with the design change.

I would think that would have been in the hands of management. So we do owe a debt of thanks to all the steelworkers, technicians, and the people that do the day-to-day stuff at SONGS because they have been successful until the design was changed.

The one thing I thought about the last meeting on May 5th, I believe, a great deal of time was spent looking at the technology of moving high level nuclear waste.

And we saw all kinds of neat containers and storage containment and stuff like that. The only problem is there is no place to move it to unless you're going to put it on trucks and keep them circling the country. There is no current high level waste. There never has been one in this county.

In fact, if you look at the history of mankind searching for a place for high level waste, we've been at it 50 years in about 25 different countries. All the scientists, the best engineers, the brightest human beings on earth have not solved this problem. So you tell me you assume in 10 years the DEO is going to take this high level, highly irradiated waste off your hands. I think you're kidding yourself because you're not kidding us. Thank you very much.

CHAIRMAN VICTOR: Thank you for your comment. And the last comment tonight will be from Venad Aurora. Could I just while you're taking the floor, sir. Several comments have been made tonight about this DOE assumption.

It is my understanding that there is a legal requirement for -- or an expectation (inaudible) or legal requirement to make some assumptions about when the DOE is going to take this. It is not the case. Certainly not the case that people are blindly assuming

the DOE is going to take this starting in 10 years or whenever it is.

So the two very distinct issues and the fact that that's in the plan is a procedural thing and I think everybody has got their eyes open about the reality. So I just want to clarify that for the record. Since several comments have been made in that regard.

Sir, the floor is yours.

VENAD AURORA: Good evening, everybody. It's a pleasure to be here and it is a pleasure to serve the society. I worked with -- for 15 years I was the fire protection engineer, the emergency plan auditor, and a (inaudible) engineer. I have a series of questions, which nobody needs to answer, in concern into the decommissioning plan which Edison has right now. These will be addressed to Tom.

SCE claims in a $4 billion lawsuit against (inaudible) delivered lemon generators and failed to come up with a license and repair plan for both units 2 and 3. SCE hired AREVA vesting out from others global experts to prepare an extensive unit 2 restart plan which SCE claims was not approved by NRC in a timely fashion.

NRC don't accept the license and board cert. They were comparable differences between the placement steam

generators and original steam generators. And told SCE and NRC to hold hearings with the license (inaudible). SCE chose to shut down both units 2 and 3. These companies, AREVA (inaudible) and others, didn't help Edison to come up with a plan which called the so public NRC (inaudible).

Now, as a fire protection engineer, I have a question. Does the dedicated power cooling plan you have for spent fuel pools is approved by NRC and based on a defense in-depth approach? You don't have the answer that question. What gives SCE the confidence in AREVA's new 32 cask assembly? My last question is would Edison and this panel consider an independent off-site consultant or a company to look into the decommissioning plans and all of the cost measures so the public can be assured of that they are safe and their money is being -- thank you.

CHAIRMAN VICTOR: Thank you. Thank you very much. I think in our previous meeting the issue oversight has been addressed. But I do note that a number of very specific questions were raised tonight and Dan Stetson and I will work with Tim Brown to prepare a list of those and get answers back along with some of the larger topics that came up in tonight's meeting.

I have a few closing items of business. But

before I do that I want to quickly ask Tom Palmisano if there is anything because the issue of fire came up so much and it is a timely one, is there anything further briefly that you want to share with us perhaps Mr. Allan from SCE who already covered that in his comments.

But is there anything further that we should know about or look for on the website concerning the issue of fire including fire risk to the fuel itself?

MR. PALMISANO: Sure. The mic's on? Thank you. Just let me clarify a few things as I think a couple of the members of the public noted the fire approached to approximately about a half mile from the south edge of the property. It never entered the property.

Camp Pendleton responded effectively along with other off-site fire fighting resources. We deployed our fire brigade on site to wet down vegetation near storage buildings on the south side. This is not the power production area of the plant. It's well south of that. The evacuation that has been mentioned, there were approximately 12 people working in these storage buildings.

We moved out of the storage buildings. We use the term "evacuation." It's certainly a precautionary measure and it wasn't because of the hazard of the fire to stage fire brigade and lay out some fire hoses and

charge fire hoses. I simply wanted them out of the way. So there was no hazard created by our fire brigades setting up to those people.

Their work was not necessarily critical so it made more sense just to move them out. We did not evaluate the plant. The plant remained manned the entire time. So that's the reality of it.

CHAIRMAN VICTOR: Thank you very much for that. Let me quickly see if anybody on the panel would like to make any additional comments on what you heard tonight. We are very limited in time but I do want to give you a chance to comment if there are things that you think pertain to our future agendas or other commentary that you want to make.

Tim Brown.

MR. TIM BROWN: Yeah. You know, I think it's important -- some of the folks from San Clemente may know this but I want to share something that is more of a personal approach; you'll have to forgive me. There's a number of elected officials up here. And first of all, none of the panel is paid. We're up here because we are very interested in the outcomes that we're going to have here.

We all have a stake in this decommissioning process. On a very personal note, you know, there are a

few people, I don't doubt, anyone in this room that maybe has had a more personal experience with the federal government's mistruths about the dangers of radiation. I happened to grow up in Mesa, Arizona.

My father was born and raised in St. Johns, Arizona. It's in northern Arizona next to the Four Corners area as was most of my family, ranchers and farmers up in that area through the 1930s to the 1970s. There are still all up there, all my cousins. And we go up there for family reunions.

The reason I'm telling this story is because when we were in the Cold War, the federal government saw it fit to detonate test, after test, after test in Nevada which prompted, blew radiation and then fallout all over Southern Utah and Northern Arizona. Because of that, my grandfather died of throat cancer, never smoked a cigarette in his life at 52.

My father died of multiple myeloma related to the Downwinders disease. I lost an uncle, a cousin, an aunt, and we've had a host of health issues in our family because of what I believe was a federal government's lack of transparency. And so I have a very personal stake in this. So I'm very interested.

But I want you to know I have great confidence, otherwise I would not live in San Clemente. I have

great confidence that this process will be done safely. At the end of this that we will accomplish what we need to accomplish. And more important than all of this is that the truth will prevail.

I don't like hyperbole. I don't like being told everything is okay. But I also don't like being told everything is falling apart. I like the truth. And so I think that we will get there in this panel. I think we've got -- everyone's interested in that. We are all here for that purpose.

And ultimately that's all I ever wanted for my family was the truth, which it did come out eventually. And -- but I have confidence for everything I've seen. You folks may not see all the things. SCE is giving us everything we ask for and more. You're providing a ton of data that we're challenging that with and I think the sum total of all this process is we're going to understand a lot more than we did when we started and I think we'll be more comfortable.

CHAIRMAN VICTOR: Other comments people would like to make?

Dan Stetson.

MR. STETSON: Yes. Just a reminder that if you go home and you have a question or you don't feel comfortable getting up here and voicing the question,

you're welcome to go onto the website and there is an application there where you could send a message or a question to us and we will do our best to answer it.

CHAIRMAN VICTOR: Thank you very much. In fact, I think the questions that are received at least 10 days prior to the next meeting of the CEP, we're going to collate all those questions so that in addition to the public comment period, we're going to collect all the questions that are submitted on the website and do our best to answer them here and there.

I think it is very important that all of us recognize that as this process unfolds, we're also gathering a huge amount of information. So many of the issues that have been raised tonight, tsunami risk, corrosion, recasking, some of the seismic questions. We've begun to look at those and there's actually quite a lot more material now already available through the CEP process on that.

And so I would urge all of us to look at that material and then if you don't agree with it then come back and say, hey, I think this is incomplete or whatever.

Other questions or comments people would like to make?

Let me just say a few final words about where we

stand next. We will brief -- we're still in the process of settling on dates for summer meetings. We'll have a workshop in June. And then a full meeting of the panel in August.

Those events will be focused on the Post-Shutdown Decommissioning Activities Report, PSDAR, and the Decommissioning Cost Estimate, the DCE. There's a lot of acronyms in this business. And those are crucially important documents in particular the Decommissioning Cost Estimate because that lays out a plan and a vision for what happens and the timing of that which is a big impact on costs.

And so we'll all be paying close attention to that. There will be a workshop in June and then a full meeting of the panel in August.

I want to say four things to close from my perspective. The first is that I've been asked to go visit the NRC in the middle of July. So if members of the panel think that there are particular issues that we need to raise to the panel of the NRC, areas of ambiguities and so on. I will do my best to raise those with Chairman McFarlin and with other members of the NRC. Second, is just to echo something that Dan Stetson said which is we are working very hard to make that website useful, songscommunity.com.

That includes now this comment form that's been added. It includes all documents that have been circulated to the CEP are now posted as of tonight. We're going to be completely transparent in this process. At some future meeting I have promised and I know Gene Stone and others are keen that we work on this as well, which is to begin a process of talking about what viable consolidation plan, waste consolidation plans might look like, long-term storage plans, what could we and Southern California do to help raise the odds of that.

That's something that our delegation in Washington is working on and some of the many comments tonight were focused on.

The last thing I'll say is at our next meeting we will have a discussion of where we've been, what we've done, where we're going next. Dan Stetson is going to led that process. Because we've been keeping fairly good records of the major topics that have been raised and how we've been doing our work.

I think we've actually made already a lot of progress for a very young panel. And we urge you to help us make sure we stay focused on what matters most for the community and that matter most for making this decommissioning process safe and effective. And with

that, we are adjourned. Thank you very much.

(Whereupon the proceedings concluded at 8:57 p.m.)

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Brooke M. Gallaugher, CSR 13360