

## San Onofre Decommissioning Community Engagement Panel

### REGULAR MEETING

Wednesday, June 27, 2018, from 5:30-8:45 p.m. PDT in San Clemente, California

#### Meeting Minutes and Action Items

#### 1) Community Engagement Panel (CEP) Member Attendance

- a) Present: Dr. David Victor (CEP Chairman/University of California, San Diego), Dan Stetson (CEP Vice Chairman/Trustee-Executive Director, Nicholas Endowment), Rich Haydon (California State Parks), Tom Caughlan (Camp Pendleton), Donna Boston (Orange County Sheriff's Department), Hon. Martha McNicholas (President, Capistrano Unified School District Board of Trustees), Hon. Paul Wyatt (Mayor Pro Tem, Dana Point City Council), Garry Brown (Orange County Coastkeeper), Valentine "Val" Macedo (Laborers' International Union of North America, Local 89), Captain Mel Vernon (San Luis Rey Band of Mission Indians), and Hon. Steve Swartz (San Clemente City Council)
- b) Absent: Hon. Lisa Bartlett (Supervisor, Orange County, 5<sup>th</sup> District), Hon. Bill Horn (Supervisor, San Diego County, 5<sup>th</sup> District), Jim Leach (South Orange County Economic Coalition), Hon. Sergio Farias (Mayor, San Juan Capistrano City Council), Hon. Jerome "Jerry" M. Kern (CEP Secretary/Oceanside City Council), Ted Quinn (American Nuclear Society), and Marni Magda (Angeles Chapter, Sierra Club)
- c) Southern California Edison (SCE) Representative: Tom Palmisano, Vice President Decommissioning & Chief Nuclear Officer

#### 2) Meeting Convened by Chairman Victor at 5:30 p.m.:

- a) Chairman Victor reminded the audience that the CEP is an engagement panel created to improve communications with the communities and open a two-way flow of information between SCE and the public; the CEP is not a decision-making body nor an oversight body
- b) The presentations from tonight can be found on [SONGScommunity.com](http://SONGScommunity.com), as well as live streaming, meeting documents, links for signing up for public walking tours of the plant site, and more
- c) SCE information booths, staffed by SCE personnel, are available before the meeting and during the break, as well as community booths
- d) A structured public comment period follows the presentations; to participate in this evening's comment period you must complete a comment card. Comments may be submitted any time to [nuccomm@songs.sce.com](mailto:nuccomm@songs.sce.com)
- e) Chairman Victor gave an overview of the meeting's agenda that includes SONGS Industry and Decommissioning Updates, Follow-Up to Questions from Communities and Dry Cask Storage Defense-in-Depth

***NOTE: VIDEO OF THIS MEETING, SPEAKER PRESENTATIONS, AND TRANSCRIPTS ARE AVAILABLE ON [SONGScommunity.com](http://SONGScommunity.com) AND THEREFORE DETAILED CONTENT IS NOT REPEATED IN THIS DOCUMENT***

#### 3) CEP General Updates, Chairman Victor [Please refer to the *CEP General Update* presentation on [SONGScommunity.com](http://SONGScommunity.com)]

- a) Federal Legislation and Appropriations:
  - i) Federal Legislation Update: The House of Representatives has passed legislation by Rep. John Shimkus (R-IL) on modifying the Nuclear Waste Policy Amendments Act of 2017 (H.R. 3053), which addresses permanent and consolidated interim storage (CIS). The legislation has been sent to the Senate. The legislation is about opening the Yucca Mountain permanent waste repository and making sure the facility will be licensed. The legislation allows federal laws to be changed to allow for CIS or monitored retrievable storage. The

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change in laws is important and is the route to getting the spent fuel out of San Onofre and transported to a site in New Mexico or west Texas.

- (1) Chairman Victor does not expect the Senate to get to this topic after the November elections and before the new Congress is sworn in. Compared to a year ago, the odds of getting the change into federal law have gone down. If there is no change in the laws, the panel and others will have to take a closer look at how far along the site in New Mexico and west Texas can operate. If there is a change in federal law, the panel will have to focus on the funding and planning on how to get the used nuclear fuel transported to the new CIS sites.
- ii) Appropriations: The appropriations process is how the government gives itself money to operate. The process of funding for offsite storage is stalled, and there is another threat of a government shutdown in September.
  - (1) The Senate removed all funding for Yucca Mountain in the energy appropriations measure. Restoring funding is largely up to Sen. McConnell (R-KY).
- b) Holtec Factory Visit: Dan Stetson provided an overview of his recent tour of the Holtec canister fabrication facility in Pittsburgh, PA. Dan Stetson and Marni Magda took a half day tour which included all stages of the manufacturing process including receipt of materials, rolling, welding, and the peening process. Holtec was open to answering all of their questions.

#### 4) Industry Updates, Tom Palmisano [Please refer to the Industry Update presentation on [SONGScommunity.com](http://SONGScommunity.com)]

- a) Holtec/Eddy-Lea Energy Alliance:
  - i) Tom Palmisano provided updates regarding the Holtec/Eddy-Lea Energy Alliance. The NRC is preparing the environmental impact statement (EIS) for the proposed CIS facility in New Mexico. Scoping meetings were conducted in the spring of 2018. EIS development is expected through mid-2019, and the preliminary Holtec schedule shows NRC license issuance by July 2020.
- b) Interim Storage Partners (ISP)
  - i) Tom Palmisano discussed the new joint venture Interim Storage Partners (ISP) which consists of Waste Control Specialists (WCS) and Orano USA. The new venture began with WCS in west Texas. WCS operates a low level waste facility that takes category A, B, and C waste. The facility is currently used by Southern California Edison for category B and C waste. The facility announced a license renewal application on June 11, 2018, and then decided to put the facility up for sale. WCS put the license application on hold and partnered with Orano USA of the AREVA Group. ISP has informed the NRC and the public that ISP will restart the licensing process. The NRC will reopen the environmental scoping in July or August 2018. ISP anticipates receiving a license in 2021 or 2022.
  - ii) David Victor requested that Tom Palmisano begin the process of collecting information and to find out if ISP has plans in case there is no change to the federal laws.
    - (1) Tom Palmisano discussed providing more information in a future meeting, adding that in this country, a spent fuel CIS facility called Private Fuel Storage has already been permitted and licensed in Utah, but never broke ground for a variety of reasons.
- c) Department of Energy (DOE) Rail Car Development:
  - i) Tom Palmisano discussed the DOE concept for shipping spent fuel by railcar. By law, the DOE is responsible for transporting the fuel to a disposal site or the fuel can be shipped

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privately. AREVA is currently fabricating railcars for the DOE; one Atlas railcar and two buffer cars for testing. AREVA has been asked to do a cost estimate for 120 railcars and 60 buffer cars; no orders have been placed. Railcar development for “private” use fabrication, purchase and leasing are options that need to be explored.

- ii) Hon. Steve Swartz asked if the canisters that SCE has on site will currently fit inside the rail car transportation casks.
  - (1) Tom Palmisano confirmed that there are three types of canisters used on site, two types of AREVA canisters and the Holtec canister. All three types are licensed for transport and have transport casks that are licensed and being built.
- iii) Garry Brown asked if the CIS facilities would use the concrete bunker style site that is currently being used at San Onofre. Garry also discussed the geological debates surrounding Yucca Mountain.
  - (1) Tom Palmisano confirmed that the CIS storage facilities would be similar to the Holtec system at San Onofre, and the facilities would not be deep geological repositories. Tom Palmisano added that the Yucca Mountain repository was found to be suitable for spent fuel storage, but he was not versed enough to discuss all of the geological concerns about the repository in detail.

#### 5) SONGS Decommissioning Update, Tom Palmisano [Please refer to the SONGS Decommissioning Update presentation on [SONGScommunity.com](http://SONGScommunity.com)]

- a) Dan Stetson asked Tom Palmisano about the dates and the locations for the two public meetings being conducted by the California State Lands Commission (CSLC) and the California Coastal Commission (CCC).
  - i) Tom Palmisano was not aware of the actual dates and locations or if the information had been posted on the website, but would share the information with the panel once the dates were confirmed.
- b) Garry Brown asked about passive cooling and what the air temperature of the canisters will be.
  - i) Tom Palmisano explained that the temperature of the fuel inside the canister is 200 to 400 degrees centigrade and the heat differential of the air temperature on the outside is a 30 to 40 degree rise in temperature. Air entering at 65 degrees will be approximately 95 to 100 degrees upon exit.
- c) Hon. Martha McNicholas asked how many shims and pins were in each canister, and the percentage of canisters that were broken or bent.
  - i) Tom Palmisano explained that there are 32 shims and a total of 88 pins in each canister. SCE used a camera to inspect the 20 unloaded canisters that had been fabricated and peened. Approximately 2.5 percent of the pins were bent or damaged out of the 20 canisters. Regarding the four canisters already loaded, all of the shims are at the correct height, so SCE knew that the shim pins were intact. Additionally, Tom Palmisano pointed out that analysis of the worst case scenario revealed that even if all 88 pins were broken and all the shims were lowered 3.5 inches to the bottom of the canister, there is no impact on the structural or heat removable capabilities of the canisters.
    - (1) Chairman Victor added that Holtec was asked to calculate the heat removable capability of the canisters if all the shims were broken, and if any of the fuel assemblies would come close to exceeding the peak allowable temperature. Tom Palmisano stated the answer was “no” and that is in the most extreme case. Chairman Victor asked if the

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canister temperature can be measured to verify that the canisters are not in the worst case scenario, but in what is statistically the more likely scenario.

- (a) Tom Palmisano responded by saying the canister edge temperature would not indicate what the fuel temperature is, but he would be willing to discuss the topic further at a future CEP meeting, and would ask Holtec for additional information on the topic.
- d) Tom Palmisano discussed plans for the Extreme Events Workshop.
  - i) Chairman Victor added that the panel is interested in identifying potential extreme events and determining what can be talked about in an appropriate way using facts, and anchored in science and reality. Other information is classified. .
  - ii) Chairman Victor asked if SCE would place a concept note on the website with the basic philosophy and to provide transparency regarding the workshop.
    - (1) Tom Palmisano agreed to take an action to post information regarding the workshop on the website after the planning meeting.
- e) Dan Stetson asked what would happen if an AREVA system was submerged under 60 feet of water.
  - i) Tom Palmisano explained that both the AREVA system and Holtec system are designed and qualified to be submerged in water. The AREVA system can be submerged by 50 feet of water and the Holtec system can be submerged by 125 feet of water. When submerged in water the canisters cool more effectively. The 60 feet of water example is not defined as a credible event for the San Clemente area which realistically is 10 feet. Tom said he would have to know the margin and would need additional details in order to respond to the panel.
  - ii) Chairman Victor asked if the questions and answers related to the follow-up topics discussed during the meeting could be linked on the website.
    - (1) Tom Palmisano agreed to take the action regarding linking questions and answers to the follow-up meeting topics.
- f) Dan Stetson asked about the thickness of the tops and bottoms of the canisters.
  - i) Tom Palmisano explained that the stainless steel lid is approximately 9 inches thick with a double weld on the top closure, and the bottom thickness is 3 inches thick.
  - ii) Chairman Victor discussed having the opportunity to talk to the Holtec engineer who invented the peening process. The engineer informed Chairman Victor that the peening process has been able to increase the lifetime of the fighter jet wing roots. For example, the F22 wing roots went from 1000 hours to 10,000 hours. The peening process has a huge impact on reducing stress to the canister welds.
- g) Chairman Victor asked how often SCE can expect to perform a full ring inspection of the canisters. Chairman Victor also asked about salt deposition on the canisters at the Diablo Nuclear Plant and when would SCE begin inspecting the canisters of the same horizontal design.
  - i) Tom Palmisano discussed first analyzing the degradation mechanisms. There is a lot of information on chloride induced stress corrosion cracking, including information from other facilities to draw from. SCE would do a systematic analysis and identify a sample of canisters. The inspections are typically visuals with high visual cameras. If something is identified, the ring may be used to perform a higher quality inspection, if warranted. In 2023, SCE will have an approved aging management system that will identify the inspection frequency, the inspection mechanisms, and the protocol should something be identified.

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SCE will work with the NRC to establish the inspection start date. The Rancho Seco Nuclear Plant has a system similar to San Onofre and have completed their inspections. The results were clean. The Calvert Cliffs Nuclear Plant is performing inspections, and SCE is receiving those results.

(1) David Victor asked SCE to create an ever-green deck of all the Defense in Depth elements, what is known and unknown, and the inspection methods that are being developed.

(a) Tom Palmisano agreed and said SCE knows more about inspections and aging management than a few years ago. SCE is committed to storing fuel safely, maintaining the canisters, and transporting them safely.

#### 6) Chairman Victor Facilitated the Public Comment Period -

- a) Public Comments were made by the following individuals:
- i) Gene Stone (Residents Organized for a Safe Environment): Rad Monitoring
  - ii) Ray Lutz (Citizen's Oversight): HELMS
  - iii) Madge Torres (Citizen's Oversight): Support of HELMS Proposal
  - iv) Darin McClure (local resident): Radiation Monitoring
  - v) Mary Beth Brangan (Ecological Options Network): Consolidated Interim Storage
  - vi) Karl Aldinger (local resident): Worst Case Scenarios / Desalination Drinking water
  - vii) Michael Ravenwood (local resident): Radioactive Waste Storage
  - viii) Viraja Prema (Safe Nuclear Waste Organization): Timeline for Removal of the Spent Fuel
  - ix) Ayla Breezy (Safe Nuclear Waste Organization): Emergency Response Plan
  - x) Pantera Michel (local resident): Nuclear Waste
  - xi) Torgen Johnson (local resident): New Mexico, Proposed CIS Site
  - xii) Linday Johnson (local resident): New Mexico, Proposed CIS Site
  - xiii) Enzo Johnson (local resident): New Mexico, Proposed CIS Site
  - xiv) Layse Johnson (local resident): New Mexico, Proposed CIS Site
  - xv) Dave Rice (local resident): Emergency Planning
  - xvi) Nina Babiarz (Public Watchdogs): Discharges to the Air and Ocean
  - xvii) Charles Langley (Surfrider Foundation): Discharge and Dilution
  - xviii) Katie Day (Surfrider Foundation): Removal of the Waste to Consent Based Location
  - xix) Mandy Sackett (Surfrider Foundation): Safely Relocating the Nuclear Waste Off the Coast
  - xx) Denise Erkeneff (Surfrider Foundation): Public Representation and Letters
  - xxi) George Allen (SCE employee and local resident): Safety and Radiation Exposure
  - xxii) Sarah Brady (local resident): Nuclear Safety
  - xxiii) Jackson Hinkle (candidate for San Clemente City Council): Discharges and Releases
  - xxiv) Ron Rodarte (Green Party, O.C., local resident): Safety and Need for Changes for Storage
- b) Dan Stetson and Paul Wyatt facilitated dialogue based on the topics conveyed during the Public Comment period.
- i) Tom Palmisano: Explained the transportability and licensing of the transportation cask for the four canisters with damaged pins.
  - ii) Tom Palmisano: Explained Emergency Planning approved by the NRC which is now primarily focused on emergency events that can affect the spent fuel pools or the canisters.

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- iii) Donna Boston: Explained risk assessments and general plans for each city. SCE has supported local emergency planning which is not federally funded. Without SCE funding the city would not have the coordinated emergency staffing and equipment in place. The city has the capability to independently monitor and interpret their results in an emergency.
- iv) Chairman Victor: Requested SCE take the action to pull together all of the elements of radiological monitoring, who is responsible, and the value of each to discuss in a future meeting.
- v) Hon. Steve Swartz: Commented that there has not been movement on the potential of real time public monitoring of the canisters or a timeline concept available for when the monitoring information will be available to the public.
- vi) Tom Palmisano: Addressed concerns related to blocked canister vents. Canisters are monitored for temperature and vents are inspected daily. Permanent monitoring will be in place as SCE completes the facility.
- vii) Tom Palmisano: Briefly explained water and gaseous discharges from the plant and will provide more detailed information in a future meeting.
- viii) Tom Palmisano: Discussed reviewing the AREVA and Holtec contracts regarding the warranties on canister cracking. Holtec provides a canister warranty, as does AREVA, but he will have to review the information. SCE is responsible under the NRC license to maintain the fuel.
- ix) Tom Palmisano: Explained that the spent fuel cannot be moved or stored at the Mesa. The Mesa is not included in SCE's NRC license. The Navy does not want the spent fuel on the Mesa.
- x) Tom Caughlan: Explained that the Marine Corp. would like the spent fuel off site and off the naval base as soon as possible. The Marine Corp. does not have the room on Camp Pendleton to store the spent fuel. The Marine Corp. supports the transfer of the spent fuel to a CIS facility or a permanent repository.
- xi) Tom Palmisano: Addressed questions regarding submerged canisters following a tsunami.

#### **7) Closing Remarks:**

- a) Chairman Victor discussed focus topics under considerations for future meetings, his interest in the Expert Panel and discussions regarding transportation and packaging, and the SCE responses to questions regarding repair strategies.
- b) Donna Boston: Urged the panel and public to register for Alert OC or Alert San Diego for emergency directions for any kind of emergency. Ready San Diego also provides information on what to do before during and after an emergency.

#### **8) Meeting adjourned at 8:45 p.m.**

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#### 9) Action Items:

	Action Item Description	Comments
1	Collect information from Interim Storage Partners regarding their plans if there is no change in federal laws, and discuss this topic in a future meeting	
2	Determine the dates and locations for the California State Lands Commission (CSLC) and the California Coastal Commission (CCC) public meetings and post to the website	
3	Determine if measurements can be taken at the edge of the canister to verify the status of the spent fuel and that statistically, the canister heat removable capabilities, are working as expected	
4	Provide information for the Extreme Events workshop, which is in the planning phase, on the SCE website	
5	Link the questions and answers to the topics presented during the follow-up portion of the meeting on the SCE website	
6	Build a Defense-In-Depth ever-green deck to identify what is known, unknown and what is being developed in the areas of inspections and aging management	
7	Identify all of the types of radiological monitoring being performed, who is responsible for each, the value, and provide the information in a future meeting	
8	Provide an overview of effluent releases, the liquid and gaseous discharges from the plant during a future meeting	
9	Provide the NRC's conclusions about long term storage of fuel at sites after plants have continued operating to a future meeting.	
10	Review the AREVA and Holtec contracts regarding warranties for canister cracking, and provide the information at a future meeting	