Compilation of Email Communications and News Articles
8/21/20 to 10/21/20

NRC FAQs and References Relevant to August 20 CEP

From: David G. Victor]
Sent: Friday, August 21, 2020 12:48 PM
To: Manuel Camargo; Lorraine Quinn Sandstrom
Cc: McNicholas, Martha; Daniel T. Stetson
Subject: (External): some documents relevant to questions and discussion topics last night

CAUTION EXTERNAL EMAIL
Lorraine

Can you include this email and the attachments in the next circular?

Darrel Dunn at NRC pointed me to some frequently asked questions on spent fuel storage and transportation on the NRC public web page:

- Storage: https://www.nrc.gov/waste/spent-fuel-storage/faqs.html
- Transportation:https://www.nrc.gov/waste/spent-fuel-transp-faq.html

Thx
David

Attachment 1 – Donna Gilmore comments re: NUHOMS canister system CoC 1029, Amendment 4 Docket ID NRC-2018-0265 AREVA TN Americas, March 13, 2019

Attachment 2 – Letter to Donna Gilmore re: SONGS Holtec UMAX system from Michael C. Layton, Director Division of Spent Fuel Management, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, July 29, 2019
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Follow-up to SONGS Batch Releases and Illegal Signage

From: Manuel Camargo
Sent: Thursday, August 27, 2020 3:04 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Rob Howard; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Kathy Ward; Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Sam Jammal; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo
Cc: Chris Thompson; Doug Bauder; Doug Woodyard (OC); Gabaldon, Joseph M; Gene James (San Clemente); John Dobken; Julie Holt; Kelli Gallion-Sholler; Kristal Jabara; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Manuel Camargo; Marisol Eaton (SD County); Mike Sappingfield; Katelin Scanlan; Steve Carlson (UCSD); Tanya Flink; Ronald Pontes; Derek J. Brice
Subject: SONGS Batch Releases - Follow up

Hello CEP Members,

I write in follow-up to the discussion we had during our CEP meeting last Thursday, Aug. 20, regarding SONGS batch releases and illegal signage.

Of particular interest to our local elected officials on the CEP, I draw your attention to the recent news release below from Chelsi Sparti of the Samuel Lawrence Foundation regarding signage. Sparti states the signs are being posted by the San Onofre Action Committee in cooperation with the Coalition for Nuclear Safety, at beach access points from La Jolla Shores to Dana Point. As we discussed last Thursday, these batch releases are safe and well within regulatory limits.

Note, the Samuel Lawrence Foundation takes Dr. Ken Buesseler out of context (from his report on Fukushima), and then includes information from Dr. Don Mosier, who has never contacted SCE regarding the processes he is commenting on.

On the other hand, let me call your attention to the recent blog post below by the Surfrider Foundation. Surfrider reached out to us at SCE for the data and engaged Dr. Buesseler to review our regulatory reports. The Surfrider Foundation concludes, "if you surfed San Onofre every single day for your entire life (100 years) your radiation exposure would still be one-tenth that of a single dental x-ray."

SAMUEL LAWRENCE FOUNDATION NEWS RELEASE

Cathy Iwane

August 18 at 6:25 PM ·

FOR IMMEDIATE RELEASE
Contact: Chelsi Sparti, Samuel Lawrence Foundation, chelsi@samuellawrencefoundation.org

Radiation discharges at San Onofre prompt awareness campaign

The recurring release of irradiated water at San Onofre State Beach is prompting a public awareness campaign stretching from La Jolla Shores to Dana Point.
At beach access points, volunteers are posting placards warning visitors about radioactive contamination and to swim or surf at their own risk.
The signs display instructions to receive text message alerts on the so-called liquid batch releases: Text the word "NUKES" to 31996.
For more than 50 years, Southern California Edison has discharged waste tainted with radioisotopes, chemicals and sewage from San Onofre Nuclear Generating Station into the ocean.
The most recent release, on Aug. 6, jettisoned nearly 19,000 gallons into the blue Pacific. That's enough to fill a 16-by-32-foot swimming pool. It adds to almost 79,000 gallons discharged during four consecutive weeks in July.
The discharges are expected to continue as the utility decommissions the nuclear plant, which quit making electricity after mechanical failures in 2012.
In the atmosphere, radioactive contamination can travel for miles. Traces have been detected from as far away as Japan. Liquid batch releases at San Onofre are a problem because of the public's cumulative exposure as a result of discharge after discharge, year after year.
Scientists warn of health risks.
An authority on radioactive contaminants, Ken O. Buesseler, addresses sea water contamination in an Aug. 7 article in the journal Science.
"No decontamination system can remove 100 percent of all radioactive contaminants," Buesseler writes.

One contaminant, tritium, "is notoriously difficult to remove because it is a radioactive form of hydrogen that is part of the water molecule itself," Buesseler writes, adding that large amounts of tritium can have harmful health effects.
Many other radioactive compounds can be found in liquid batch releases at San Onofre, said Dr. Don Mosier of Del Mar.
"We do not know how many of them are present and at what level since there is no consistent monitoring," Mosier said. "This ignorance allows real health risks to be ignored."
At the very least, we can warn people, says Alice McNally, a Del Mar residents and founder of the San Onofre Action Committee, a homespun group of about a dozen volunteers.
In cooperation with the Coalition for Nuclear Safety, McNally and cohorts track liquid batch releases, post signs and issue text message alerts.
"I want my grandkids to be able to grow up safely on our coastline, which is one of the most beautiful in the world and also is in jeopardy," McNally said.
Additional support comes from the Samuel Lawrence Foundation, which is pushing for improved containment of the highly radioactive waste stranded at San Onofre State Beach.
Public awareness of liquid batch releases heightened in 2019, after Surfrider Foundation pressured the utility to provide release notifications and other information on www.songscommunity.com.
To take action, visit www.samuellawrencefoundation.org.

SURFRIDER FOUNDATION BLOG POST

Radioactive Liquid Effluent Releases at San Onofre: How Worried Should We Be?
By Katie Day

Last year, Surfrider learned that the San Onofre Nuclear Generating Station (SONGS) has frequently been releasing radioactive effluent into the ocean, right next to one of the nation's most beloved and popular surfing beaches, San Onofre State Park, for over 50 years. Needless to say, we were horrified. How much exposure have we had surfing there weekly, if not daily, for years? My kids surf there all the time, is their health at risk? Is this even legal? When are these happening?

After interviewing expert Dr. Ken Buesseler to learn more about the risks (see full discussion below) we learned that while any additional radiation exposure is concerning, the amount reportedly released during liquid batch releases at SONGS is 20 times lower than the level of radiation already in the ocean off California, which is 5,000 times lower than drinking water standards set by the World Health Organization. In other words, if you surfed San Onofre every single day for your entire life (100 years) your radiation exposure would still be one-tenth that of a single dental x-ray. So while the risk is considered very low, we still believe you have the right to know about it.

Full blog here:
https://www.surfrider.org/coastal-blog/entry/radioactive-liquid-effluent-releases-at-san-onofre-how-worried-should-we-be

Manuel C. Camargo Jr.
Principal Manager, Strategic Planning
SONGS Decommissioning
Southern California Edison
www.SONGScommunity.com
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OC Register Article: Licensing of temporary storage for nuclear waste in New Mexico inching forward

From: Lorraine Quinn Sandstrom
Sent: Thursday, August 27, 2020 9:54 AM
To: David Victor; Daniel T. Stetson; Martha McNicholas; Lisa Bartlett; Donna Boston; Garry Brown; Jim Desmond; Rich Haydon; Rob Howard; Sam Jammal; Jim Leach; Val Macedo; Marni Magda; Ted Quinn; John Taylor; Mel Vern; Kathy Ward; Paul Wyatt; Kristal Jabara; Gene James; Ken Schultz; Mike Sappingfield; Douglas Woodyard; Jackie Littler; Veronica Ferencz; Marisol Edrozo; Tanya Flink; Victor Cao; Nicole Perez
Cc: Manuel Camargo; Doug Bauder; John Dobken; Liese Mosher
Subject: Recent OC Register article - Licensing of temporary storage for nuclear waste in New Mexico inching forward

Dear CEP Members and Alternates,

For your awareness, the following article was published by the Orange County Register this week and includes a quote from David Victor.

Licensing of temporary storage for nuclear waste in New Mexico inching forward

Nuclear regulator poised to OK move of spent fuel from reactors like San Onofre to temporary storage in New Mexico, but locals are opposed

By **TERI SFORZA** | tsforza@scng.com | Orange County Register
PUBLISHED: August 25, 2020 at 5:59 p.m. | UPDATED: August 26, 2020 at 1:13 p.m.

After years of processing, the Nuclear Regulatory Commission's preliminary recommendation is that Holtec International be granted a license to build and operate such an interim storage site in New Mexico — which would first accept "stranded waste" from shuttered plants like the San Onofre Nuclear Generating Station.

"Hopeful," said David Victor, an international law professor at UC San Diego and chair of San Onofre's volunteer Community Engagement Panel. "But the regulatory process and the political process for the New Mexico site are moving in opposite directions."

The NRC is hosting online meetings to present the project's draft environmental impact report and gather public comment. The next virtual meetings are slated for 3 p.m. Wednesday, Aug. 26, and 8 a.m. Tuesday, Sept. 2. Public comments must be submitted to the NRC by Sept. 22.

Holtec hopes to build the first of a 20-phase project that eventually would cover 330 acres. It would be located in southeast New Mexico, about halfway between the cities of Carlsbad and Hobbs, and would look quite familiar to Southern Californians: Waste, potentially from all over the nation, would be stored in a Holtec HI-STORM UMAX in-ground system like the one at San Onofre.

The project's impact on the environment would be minor, the NRC concluded, and would boost employment, economic activity and tax revenues in the region.

But anyone familiar with the saga of Yucca Mountain — as well as the controversy surrounding waste storage here at San Onofre — won't be surprised to find that the underlying issues are universal: Many locals adamantly oppose storing nuclear waste in their backyards.

Though the license period for Holtec's New Mexico proposal would be 40 years, people fear nuclear waste would remain there forever.

"Establishing an interim storage facility in this region would be economic malpractice," wrote New Mexico's governor, Michelle Lujan Grisham, in a letter asking President Donald Trump to oppose Holtec's project. "Accidents are possible and unacceptably detrimental to the safety of New Mexicans, our economy and our state."

The governor argued that the site is geologically unsuitable, would place a financial burden on the state and local communities and poses a danger as spent nuclear fuel is shipped into New Mexico from around the nation.

Critics have joined her in registering their disapproval. "You have no interest in understanding our concerns," a woman told NRC staffers in an online meeting on Tuesday, Aug. 25. "Every state has clearly said no to hosting a storage site for this waste. The people of New Mexico also say no."

'Under protest'

Holtec submitted its application for the consolidated interim storage facility to the NRC in 2017. The NRC published its draft environmental report on the project in March, expecting a 60-day public comment period. Then the pandemic hit, and the deadline for public comment was extended twice. The current deadline is Sept. 22, which triples the length of the comment period to 180 days.

Many New Mexicans, however, say that's not enough. Speaking "under protest" at virtual meetings they believe may be unlawful, critics said the NRC must present its findings in state and in person. Since in-person gatherings can't happen during the pandemic, deadlines should be postponed until after the pandemic is over, they argued.

Speakers also attacked Holtec's crediblilty. The company is currently embroiled in conflict in New Jersey, where it sued the New Jersey Economic Development Authority in March for holding up a $26 million payment that was part of a tax incentive program to build a facility in Camden.

The authority asserts that Holtec failed to mention that it had run into hot water with the Tennessee Valley Authority on its tax credit application in 2014.

The Southern California News Group reported that the U.S. Attorney's Office looked into bribery allegations and asserted that a subcontractor manufacturing Holtec's casks — U.S. Tool & Die — wrote checks totaling $54,212 to the account of a TVA manager. That money, the U.S. Attorney's Office said, originated with Holtec.

The TVA manager pleaded guilty to falsifying financial statements by not disclosing those payments. Holtec said it wasn't privy to any of this, and was not charged. But in 2010, the company paid a $2 million "administrative fee" to the TVA and became the first contractor in TVA history to be debarred. Its contract was suspended for 60 days, and it submitted to a yearlong monitoring program of its operations, according to the TVA's inspector general.

Holtec continued supplying waste storage casks to the TVA, as well as to other nuclear plants in America and overseas.

At San Onofre, Holtec has had other bumps, including a surprise redesign of the canisters that hold nuclear waste and a snippy war of words with members of the San Onofre Community Engagement Panel. Errors loading spent fuel into the UMAX stopped operations for nearly a year, but were laid at the feet of operator Southern California Edison.

What's next?

Nuclear waste storage is not unknown in New Mexico. The Waste Isolation Pilot Plant — the nation's only deep geologic repository, for the U.S. Department of Energy — is about 16 miles south of Holtec's proposed project. There, nuclear waste is permanently disposed of in underground salt beds more than 2,000 feet below the surface.

Edison, for its part, is working on a plan to relocate San Onofre's spent fuel whether interim storage is approved in New Mexico or not. It's expected to be released early next year. The NRC's public health and safety examination of Holtec's New Mexico proposal is slated for release mid-2021.

Temporary storage has emerged as an option thanks to the federal government's paralysis on the bigger issue — where to permanently dispose of commercial nuclear waste. Yucca is still the officially designated site, but Nevada is as adamantly opposed to that project, as is New Mexico to Holtec's.

Public comments are due by Sept. 22, and can be made at the online meetings; by email to Holtec-CISFEIS@nrc.gov; at the federal rule-making website (www.regulations.gov, Docket ID NRC-2018-0052); or by mail (Office of Administration, Mail Stop: TWFN-7-A60M, ATTN: Program Management, Announcements and Editing Staff, U.S. NRC, Washington, DC 20555-0001).

Thank you,

Lorraine Sandstrom
Community Affairs and Relations, Senior Specialist
Community Engagement Panel (CEP) Management and Stakeholder Engagement (AWS Bldg. D-D23)
Southern California Edison, San Onofre Nuclear Generating Station (SONGS)

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Letter to Editor: Laguna Beach is Safer as SONGS Continues Decommission by Marni Magda

From: Manuel Camargo
Sent: Monday, August 31, 2020 5:44 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Rob Howard; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Kathy Ward; Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Sam Jammal; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo
Cc: Chris Thompson; Doug Bauder; Doug Woodyard (OC); Gabaldon, Joseph M; Gene James (San Clemente); John Dobken; Julie Holt; Kelli Gallion-Sholler; Kristal Jabara; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Manuel Camargo; Marisol Eaton (SD County); Mike Sappingfield; Katelin Scanlan; Steve Carlson (UCSD); Tanya Flink
Subject: FYI - Letter to the editor re SONGS by Marni Magda

Hello CEP,

I write to share a letter to the editor by CEP member Marni Magda, which ran in the Laguna Beach Independent on Aug. 28. Thank you, Marni.

Manuel

> https://www.lagunabeachindy.com/letter-laguna-beach-is-safer-as-songs-continues-decommission/

Letter: Laguna Beach is Safer As SONGS Continues Decommission

All of Orange County beaches are safer now as Southern California Edison (SCE) continues to decommission the closed San Onofre Nuclear Generating Station (SONGS).

The transfer of the SONGS spent nuclear fuel from the cooling pools to the passive dry cask storage was safely completed Aug. 7. The spent nuclear fuel is safer now! SCE's goal is to move the spent nuclear fuel off

site as soon as a federal law allows. A federal law must be passed to move spent nuclear fuel off site.

SCE's Inspection and Maintenance Program approved by the California Coastal Commission July 16 guarantees the canisters will remain ready for safe off site transportation.

Friends of mine in Laguna were afraid to surf in San Clemente because of signs posted on the beach warning of dangerous SCE release of radiated water into our ocean. Independent expert Eric Goldin used science to assure that San Clemente and all surrounding beaches are safe for daily surfing, swimming, or sunning on the beach. Any signs posted are illegal and do not have scientific backing.

I hope Laguna Beach City council will join SCE and all stakeholders to create a strategic plan to move spent nuclear fuel away from SONGS and all of our oceans as soon as possible.

Marni Magda, Laguna Beach

Manuel C. Camargo Jr.
Principal Manager, Strategic Planning
SONGS Decommissioning
Southern California Edison
www.SONGScommunity.com

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Surfer Magazine Article on SONGS Batch Releases

From: Manuel Camargo
Sent: Wednesday, September 02, 2020 3:26 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Rob Howard; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Kathy Ward; Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Sam Jammal; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo
Cc: Chris Thompson; Doug Bauder; Doug Woodyard (OC); Gabaldon, Joseph M; Gene James (San Clemente); John Dobken; Julie Holt; Kelli Gallion-Sholler; Kristal Jabara; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Marisol Eaton (SD County); Mike Sappingfield Mike Sappingfield; Katelin Scanlan; Steve Carlson (UCSD); Tanya Flink; Eric M Goldin
Subject: FYI - Surfer Magazine on SONGS Batch Releases

Hello CEP,
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I write to share an article posted by *Surfer Magazine* on SONGS wastewater batch releases. The story focuses on the recent blog post by Surfrider Foundation and includes helpful messaging on the safety of the releases to the ocean.

Manuel

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How Worried Should We Be About Radioactive Releases from San Onofre?

SURFRIDER SCIENTIST KATIE DAY AND MARINE RADIOCHEMIST DR. KEN BUESSELER DISCUSS

SEPTEMBER 1, 2020 BY OWEN JAMES BURKE SOCIAL ICON RSS

As many San O regulars know, for over 50 years, the San Onofre Nuclear Generating Station (SONGS) has occasionally released radioactive effluent into the ocean, just down the coastline from San Onofre State Beach, home to everyone's favorite logging haunts as well as Trestles' high-performance playground.

That particular stretch of coast sees nearly 2.5 million visitors a year, according to the California Department of Parks and Recreation, and many, if not most of them obviously find themselves in the water. Sounds like a problem, right?

Surfrider Foundation, which pushed Southern California Edison (SCE) to provide the public advanced notice of the batch releases of liquid effluent into the ocean (you can keep track here) published a discussion between their staff scientist Katie Day and marine radiochemist Dr. Ken Buesseler about just how much these batch releases should concern people.

"Most people don't realize it, but the ocean already contains many of these same radioactive contaminants left over from atmospheric fallout from nuclear weapons testing from the 1950s to '60s," says Dr. Buesseler, who founded the Center for Marine and Environmental Radioactivity (CMER) at the Woods Hole Oceanographic Institution (WHOI). "For background, the highest value recorded off the California coast was 8 Bq (Becquerel) /m3 [one Becquerel is one decay event per second, and one cubic meter is about 260 gallons of water] at Scripps Pier in La Jolla in 1961."

It turns out that, according to the reported amount of effluence—0.06-0.1 Bq/m3—we're looking at about one-twentieth the concentration of radioactive contamination that already exists within the surface waters of the West Coast. Buesseler says that even if you were to surf or swim at San O every day for the rest of your life, or better yet for 100 years straight, it would result in "an additional dose that is more than 10 times smaller than the radiation we receive with a single dental x-ray." Unless, of course, the levels being self-reported by SCE aren't actually the levels being discharged.

Buesseler says that WHOI has conducted only one test in the last several years of a SONGS discharge, which is released 1.1 miles offshore. The good news is that if you really want to double check SCE's numbers, you can collect 5 gallons of water nearby before, during, and after

a known discharge, and ship it to Buesseler's lab. "Ocean sampling for cesium-137 [the easiest radioactive contaminant to monitor] is available via OurRadioactiveOcean.org if a group of local citizen scientists want to help collect the 5 gallons needed to detect cesium-137 and crowd-fund to help pay for analyses at our research facility at WHOI." The price tag is unfortunately steep, costing $550 per sample.

As far as the effect this radioactive effluent has on seafood caught in the area, Buesseler sees no cause for concern (though it's best to check with California's Office of Environmental Health Hazard Assessment for a bevy of other reasons). Buesseler told Surfrider that, "[G]iven the levels in the ocean today, [WHOI] would not expect there to be a concern either for humans consuming seafood near the outfall or for the health of marine life near the outfall." Even using Japan's threshold for cesium-137 levels, which are reportedly the most stringent (100 Bq/kg), the levels of cesium-137 being reported aren't high enough to be considered unsafe.

So, if you find yourself so lucky, you're probably safe to keep surfing San O on the daily, save for the usual hazards associated with having hundreds of people on heavily-glassed logs jockeying for waves. But, of course, having a group of surfing citizen scientists collect some samples for WHOI for more thorough, objective analysis would surely help everyone sleep better as well.

Manuel C. Camargo Jr.
Principal Manager, Strategic Planning
SONGS Decommissioning
Southern California Edison
www.SONGScommunity.com

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Podcast Featuring David Victor re: SONGS

From: Manuel Camargo
Sent: Thursday, September 10, 2020 6:36 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Rob Howard; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Kathy Ward; Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Sam Jammal; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo
Cc: Chris Thompson; Doug Bauder; Doug Woodyard (OC); Joseph M Gabaldon; Gene James (San Clemente); John Dobken; Julie Holt; Kelli Gallion-Sholler; Kristal Jabara; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Manuel Camargo; Marisol Eaton (SD County); Mike Sappingfield; Katelin Scanlan; Steve Carlson (UCSD); Tanya Flink; Vincent J Bilovsky
Subject: Podcast featuring David Victor re SONGS

Hello All,

David Victor is interviewed by Kari Hulac of Deep Isolation in a podcast titled, "San Onofre: A Lesson in Nuclear Power Plant Decommissioning" which is available HERE. The piece is just under 24 minutes long.
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Feel free to share the podcast with others in your networks. As you will see, the web page that houses the podcast includes a handy "share" button at the top left.

Best regards,

Manuel

Manuel C. Camargo Jr.
Principal Manager, Strategic Planning
SONGS Decommissioning
Southern California Edison
www.SONGScommunity.com

No attachment
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Message from David Victor re: CEP Focus Areas and Recent Letter from Kris Singh (Holtec)

From: Lorraine Quinn Sandstrom
Sent: Monday, September 14, 2020 4:29 PM
To: David G. Victor; Daniel T. Stetson; Martha McNicholas; Lisa Bartlett; Donna Boston; Garry Brown; Jim Desmond; Rich Haydon; Rob Howard; Sam Jammal; Jim Leach; Val Macedo; Marni Magda; Ted Quinn; John Taylor; Mel Vernon; Kathy Ward; Paul Wyatt; Kristal Jabara; Gene James; Ken Schultz; Mike Sappingfield; Douglas Woodyard; Jackie Littler; Veronica Ferencz; Marisol Edrozo; Tanya Flink; Victor Cao; Nicole Perez
Cc: Doug Bauder; Manuel Camargo
Subject: A Message from David Victor Regarding CEP Focus Areas and Recent Letter from Kris Singh (Holtec)

Forwarding an e-mail message and attachment per David Victor's request.

Dear CEP members,

Now that the fuel offloading campaign is complete it our job, more than ever, to focus on a) strategies for removing the fuel responsibly and promptly from our community, and b) the long-term integrity of the spent fuel storage system and.

The next CEP meeting will focus on "a".

Regarding "b," one issue of paramount importance for the long-term integrity of the spent fuel system is understanding the array of options for repairing a spent fuel canister in the extremely unlikely event that repairs were necessary due to corrosion or cracking or some other factor that might lead to a material breach. (So far, nowhere in the world has a stainless steel spent fuel canister system of the type used in the US ever needed such a repair after being placed into service.) Several such options now exist, as we have discussed repeatedly at CEP meetings. Attached please find a letter from Kris Singh, CEO of Holtec, to me regarding persistent mis-characterization of his remarks several years ago about
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these different options. Dr Singh thought it important to correct the record once again and to underscore that Holtec has a preferred option in case of a damaged canister (a Russian approach that puts a damaged canister inside another cask) but that other options also exist. (Those other options include the nickel spraying method discussed at recent CEP and Coast Commission meetings.)

The essence of Dr. Singh's letter, which he asked me to share with the full CEP, is to remind us that his remarks, in proper context, were never intended to claim that canisters can't be repaired. Rather, his point was that Holtec had a different method that it thought worked better. I chaired the meeting where those remarks were made, and Dr. Singh's correction of the record is accurate in my view.

All best wishes in these troubling times,

David Victor
SONGS CEP Chairman

Lorraine Sandstrom
Community Affairs and Relations, Senior Specialist
Community Engagement Panel (CEP) Management and Stakeholder Engagement (AWS Bldg. D-D23)
Southern California Edison, San Onofre Nuclear Generating Station (SONGS)

Attachment 3 – CEP Clarification Letter to David Victor from Kris Singh (Holtec)
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Coast News Group Features Op-Ed by CEP Officers

From: Lorraine Quinn Sandstrom
Sent: Wednesday, September 16, 2020 4:39 PM
To: David G. Victor; Daniel T. Stetson; Martha McNicholas; Lisa Bartlett; Donna Boston; Garry Brown; Jim Desmond; Rich Haydon; Rob Howard; Sam Jammal; Jim Leach; Val Macedo; Marni Magda; Ted Quinn; John Taylor; Mel Vernon; Kathy Ward; Paul Wyatt; Kristal Jabara; Gene James; Ken Schultz; Mike Sappingfield; Douglas Woodyard; Jackie Littler; Veronica Ferencz; Marisol Edrozo; Tanya Flink; Victor Cao; Nicole Perez
Cc: Manuel Camargo; Doug Bauder; John Dobken
Subject: CEP Officers' Op-Ed in Coast News Group (north San Diego County)

Dear CEP Members,

Sharing recent op-ed drafted by the Community Engagement Panel officers and posted by the Coast News Group (north San Diego County).

Commentary: Next at San Onofre? Remove the fuel

September 15, 2020
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By David G. Victor, Daniel T. Stetson and Martha McNicholas

On August 7, the last of the spent nuclear fuel storage canisters was lowered inside a concrete and steel bunker at the site. Over the next decade the rest of the site, including the domes, will come down. But the bunker will stay until there is new federal policy that can move the spent fuel.

Over the years, there has been vehement disagreement about San Onofre, but we hope there is one topic on which everyone agrees: the spent fuel must be removed.

As officers of the San Onofre Community Engagement Panel (CEP), a volunteer organization tasked with helping improve communications between SCE and the local communities, we have been on the front lines of these debates. We convene regular meetings – all open to the public, with video documentation online and archived – with the top nuclear experts in the country presenting their views and data to the public.

We have looked at every aspect of the plant—even topics, like terrorist threats, that are hard to talk about without classified data. No other nuclear plant in the country has had so comprehensive a program for public engagement than the one at San Onofre.

In our meetings, no subject has generated more concern than the problem of moving the spent fuel. Across the political spectrum, people are shocked and angry to learn that the decommissioning of the plant does not mean the removal of everything.

The problem is that there is no place to send the fuel rods. Back in 1982, Congress outlined its vision in the Nuclear Waste Policy Act, and in the years since that vision has turned into a pernicious plan: stick Nevada with the fuel at Yucca Mountain.

The US Government has already spent more than $15b investigating the site in the desert outside Las Vegas; it has learned a lot of science, but it now looks unlikely the site will ever open. Yet 17 reactors at 14 sites in 11 states that are no longer operating — reactors, like here at San Onofre, that have no place send their spent fuel because political gridlock, like at Yucca, keeps their fuel stuck onsite.

The government collected a huge pile of cash, amassed into a $46 billion fund according to the 2016 audit, to pay for permanent disposal. The Federal government is now in breach of contract and some utilities have sued to get back the money that belongs to their customers. Each step in the Yucca logic is easy to understand, but the story overall hasn't solved the waste problem.

We here in the communities around San Onofre must lead the way for a solution. No community is more focused and organized; none has a Congressional delegation so ready to act.

The solution isn't doubling down on Yucca Mountain. The politics in Nevada are too fraught and flaky to make that a viable plan. Nice-sounding ideas — like moving the spent fuel on to Camp Pendleton or to the Palo Verde Nuclear plant in Arizona (which is partly owned by California electric companies) — are interesting to think about. They need

constant probing and updating as new political forces alter what is practical in the real world — so that we aren't tilting at options that won't work in reality.

Realism demands, too, that we focus on what's clearly the best solution: "interim storage"— a safe place to send the spent fuel while the nation works out better options than Yucca and while new technologies create new options for permanent disposal.

Two sites — one in New Mexico and another in Texas — are already lining up. More will follow if a change in federal law makes interim storage a viable option. We may not want to store spent fuel here at San Onofre, but other communities are keen for the business.

Success requires at least two things. First, we must get the California delegation fully aligned on this mission after the November election. Some members are reliably engaged — like Dianne Feinstein, Scott Peters, Mike Levin, Harley Rouda, Salud Carbajal, and Tony Cárdenas — but many are not.

We must reach out to build a bigger coalition that shows California's strength and also engages other communities around the country that are in the same pickle—from Illinois to Ohio, Vermont, New York, Texas and many other states that span the political spectrum.

Second, and probably harder, we must band together as a community to focus on the big picture. Passion and acrimony around San Onofre have led to wild claims about the dangers of spent fuel storage in stainless steel canisters.

Those have needlessly rattled the local community and are fodder for other communities that watch us and wonder: why would we want to be interim storage sites? The lessons from the coronavirus pandemic, global warming and many other dangers are that good policy must start with science. The same is true here.

David G. Victor, CEP Chair, UCSD Professor at the School of Global Policy and Strategy, Adjunct Professor in Climate, Atmospheric Science & Physical Oceanography at the Scripps Institution of Oceanography
Daniel T. Stetson, CEP Vice Chair, President Emeritus of the Ocean Institute, Executive Director and Trustee of The Nicholas Endowment
Martha McNicholas, CEP Secretary, Capistrano Unified School Board Vice President and Trustee, Retired Engineer.

Thank you,
Lorraine Sandstrom
Community Affairs and Relations, Senior Specialist
Community Engagement Panel (CEP) Management and Stakeholder Engagement (AWS Bldg. D-D23)
Southern California Edison, San Onofre Nuclear Generating Station (SONGS)

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Coast News Group Article – Push to revisit NAS cancer study

From: Lorraine Quinn Sandstrom
Sent: Wednesday, October 07, 2020 5:57 PM
To: David G. Victor; Daniel T. Stetson; Martha McNicholas; Lisa Bartlett; Donna Boston; Garry Brown; Jim Desmond; Rich Haydon; Rob Howard; Sam Jammal; Jim Leach; Val Macedo; Ted Quinn; Marni Magda; Kathy Ward; Paul Wyatt; Kristal Jabara; Gene James; Mel Vern; John Taylor; Ken Schultz; Mike Sappingfield; Douglas Woodyard
Cc: Jackie Littler; Veronica Ferencz; Marisol Edrozo; Tanya Flink; Victor Cao; Nicole Perez; Manuel Camargo
Subject: For Awareness - Coast New Group Article - Push to revisit NAS cancer study

Dear CEP Members,

For your awareness, the Coast News Group wrote an article on the recent petition calling for a cancer study for people living in the vicinity of nuclear power plants. Dr. Eric Goldin and John Dobken, both from SCE, provided comments.

Petition calls for cancer study around San Onofre plant

by Samantha Nelson October 7, 2020

REGION — A recently circulated petition is calling for federal funding to research possible cancer risks of people living near nuclear power plants like the San Onofre Nuclear Generating Station.

According to the Samuel Lawrence Foundation, which circulated the petition, nearly 1,200 people have signed it. The petition calls for Congress to secure $8 million in federal funding to bring back a National Academy of Sciences report, "Analysis of Cancer Risks in Populations Near Nuclear Facilities."

The Nuclear Regulatory Commission (NRC) originally approached the National Academy of Sciences (NAS) to perform a study on cancer risks for populations living around nuclear facilities. The NRC then ended the project in 2015 after concluding it wasn't likely that researchers could collect usable results in a reasonable time.

As part of the research, NAS recommended a pilot study of seven nuclear facilities, including San Onofre.

There were several challenges identified: the need for larger groups of people to detect very small changes in risk, uneven availability and quality of cancer data for areas smaller than a county, and difficulty in reliably getting information on population movement and other variables. The pilot study would determine if those challenges could be overcome.

NAS researchers determined that the pilot study was unlikely to answer the question of whether it was able to gather enough data for estimating cancer risks in populations near nuclear facilities. They also determined that they would need more than three years and $8 million to complete the pilot study.

If the pilot succeeded, expanding research to all of the nation's nuclear facilities would take longer and tens of millions of more dollars. The NRC decided the time and money would not be well spent for possible lack of useful results.

Petitioners, however, want researchers to go forward with the study.

"We want to know if the people have been getting cancer," said Roger Johnson, a retired neuroscience professor and cosponsor of the petition.

The petition was sent to the offices of California congress members Rep. Mike Levin (D-49), Rep. Salud Carbajal (D-24), Rep. Katie Porter (D-45) and Rep. Harley Rouda (D-48).

According to Johnson, one of the biggest issues in the country is the inability to find a permanent repository to store nuclear waste. He added that cancer is now the number one killer in California, but the source of cancer can be difficult to trace — hence the need for the study.

Petitioners are concerned about California's "decades-long history" of radiological releases into the ocean and air from San Onofre and Diablo Canyon nuclear plants.

San Onofre's emissions slowed after the plant shut down in 2012. According to SLF, those emissions are expected to increase with demolition.

Johnson is concerned that the radiological releases over time have built up and are causing cancer in people over a period of years.

"You may get radiated tomorrow and years from now you may get cancer," Johnson said.

According to Eric Goldin, a project manager and certified radiation protection professional who has worked at SONGS for over 30 years, in order to properly study a population near a nuclear facility plant, each person would need to be wearing a dosimeter, a device used to measure radiation exposure.

Goldin said there is already a big study underway that is looking at radiation exposure for people who work in nuclear facilities and other radiation industries, like medicine and radiologists. These approximately 1 million workers being monitored wear dosimeters while on the job, which provides good data for the study.

Workers in radiation industries are exposed to far more radiation than the public, Goldin said.

According to Goldin, residents near the power plant are not being exposed to enough radiation from the plant to cause cancer.

He explained that a person who lived at the plant site would have to be present on the property continuously for a year to be exposed to any airborne releases to receive not even 1 millirem of radiation. On average, humans receive about 310 millirems annually from background radiation and other sources, including their own bodies.

An airplane ride across the country exposes a person to about 2-5 millirems, he added.

Additionally, the liquid batch releases at SONGS are 20 times lower than the level of radiation already in the ocean, which is 5,000 times lower than drinking water standards set by the World Health Organization.

"Federal and state regulatory limits are in place to ensure the protection of the health and safety of the public and employees," said John Dobken, SONGS spokesperson, via email. "The releases are well-below these regulatory limits and documented in annual reports submitted to the Nuclear Regulatory Commission."

https://thecoastnews.com/petition-calls-for-cancer-study-around-san-onofre-plant/

Thank you,

Lorraine Sandstrom
Community Affairs and Relations, Senior Specialist
Community Engagement Panel (CEP) and Stakeholder Engagement (AWS Bldg. D-D23)
Southern California Edison, San Onofre Nuclear Generating Station (SONGS)

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Update on SONGS Batch Releases of Water

From: Manuel Camargo
Sent: Monday, October 19, 2020 6:46 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Rob Howard; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Kathy Ward; Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Sam Jammal; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo
Cc: Doug Bauder; Doug Woodyard (OC); Gabaldon, Joseph M (; Gene James (San Clemente); Gene James; John Dobken; Julie Holt; Kelli Gallion-Sholler; Kristal Jabara; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Marisol Eaton (SD County); Mike Sappingfield; Katelin Scanlan, Steve Carlson (UCSD); Tanya Flink; Ronald Pontes; Brian Metz
Subject: For Awareness - Update on SONGS Batch Releases of Water

Hello CEP Members,
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I write to make you aware of larger volume batch releases of water from SONGS as we proceed with decommissioning the plant. All releases remain safe and well within regulatory limits. A web post on these batch releases is available HERE.

As with all batch releases, we will post a notice to the website 48 hours in advance of the release. In this particular case, a notice will be posted early on Tuesday, Oct. 20, for the planned batch release on Thursday, Oct. 22.

Best regards,

Manuel

Manuel C. Camargo Jr.
Principal Manager, Strategic Planning
SONGS Decommissioning
Southern California Edison
www.SONGScommunity.com

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Voice of OC Op-Ed: Misleading Readers About Spent Nuclear Fuel Serves No Purpose

From: Lorraine Quinn Sandstrom
Sent: Wednesday, October 21, 2020 10:21 AM
To: David G. Victor; Daniel T. Stetson; Martha McNicholas; Lisa Bartlett; Donna Boston; Garry Brown; Jim Desmond; Rich Haydon; Rob Howard; Sam Jammal; Jim Leach; Val Macedo; Marni Magda; Ted Quinn; John Taylor; Mel Vern; Kathy Ward; Paul Wyatt; Kristal Jabara; Gene James; Ken-Schultz; Mike Sappingfield; Douglas Woodyard; Jackie Littler; Veronica Ferencz; Marisol Edrozo; Tanya Flink; Victor Cao; Nicole Perez
Cc: Manuel Camargo; John Dobken; Liese Mosher; Doug Bauder
Subject: Voice of OC Op-Ed: Misleading Readers About Spent Nuclear Fuel Serves No Purpose

Dear CEP Members,

I am sharing the recent op-ed provided to the Voice of OC by John Dobken, SONGS Public Information Officer, for your awareness. The link and full article are provided below.

https://voiceofoc.org/2020/10/dobken-misleading-readers-about-spent-nuclear-fuel-serves-no-purpose/
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Dobken: Misleading Readers About Spent Nuclear Fuel Serves No Purpose



The Holtec dry fuel storage system at San Onofre. Each of the 73 canisters has a service life of 100 years or more. (Credit SCE)

By JOHN DOBKEN October 20, 2020

11 SHARES

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In a recent conversation I had, the discussion turned to the reason some people disseminate misleading or outright false information about spent nuclear fuel and radiation. One group had just released a video that claimed spent nuclear fuel in California puts "you, your family, and everything else that lives in California at risk." It's a statement that has no scientific basis. So why do they say it?

The public deserves the facts about spent nuclear fuel and its storage. The current path to a long-term storage solution essentially began with the Nuclear Waste Policy Act of 1982. Since then, there has been a series of fits and starts including more legislation; funding the Yucca Mountain repository; political battles; nuclear plant sites building their own temporary storage systems; de-funding Yucca Mountain; introducing consolidated interim storage plans; and a myriad of other developments.

Through all of that activity over nearly 40 years, plus countless scientific and engineering studies by national labs, legislative hearings and fact-finding efforts, as well as private research, we have a pretty good idea of what spent nuclear fuel is capable of, and what it isn't capable of. Yet, there are still a few here in Southern California who believe fear should be the primary motivator for action. They keep repeating "8 million people live within 50 miles of San Onofre," with no basis around what 50 miles signifies. What benefit derives from portraying spent nuclear fuel as a "ticking time bomb" or "another Chernobyl" when it clearly isn't? Better policy? Likely not.



Jerry Stephenson, SCE dry fuel storage engineering manager, explains how the storage area radiation monitors work. Only one other nuclear plant in the country has a similar system. (Credit: SCE)

We take safety extremely seriously in the nuclear industry, including the safe storage of spent nuclear fuel. We welcome like-minded people advocating for robust safety measures that are based in science and sound engineering practices. With input from the public, Southern California Edison installed radiation monitors around the dry fuel storage systems at San Onofre, which goes above and beyond Nuclear Regulatory Commission requirements. That data is available from the California Department of Public Health.

But Sarah Mosko's latest piece isn't grounded in any science or engineering principles.



A ceramic nuclear fuel pellet. The pellets are contained within zirconium alloy rods and sealed inside spent fuel storage canisters. (Credit: NEI)

The spent nuclear fuel canisters in use at San Onofre have a service life of 100 years or more. To Mosko, this is a "very short term." One hundred years ago, just 35 percent of U.S. households had electricity. Over the next 100 years, the fuel will become less radioactive, continue cooling, and remain safely confined from people and the environment. This time frame serves the development of a repository, which is, again, where the focus should be.



Metallic Overlay: Technicians watch as a robot applies a nickel coating to the test canister at San Onofre during a field demonstration of SCE's chosen repair method for canister degradation. (Credit: SCE)

Mosko contradicts herself regarding canister inspection and repair. One of her "facts" is that there is no technology to inspect for cracks. And the next "fact" is that we have a repair method for canister cracks. It would be illogical to develop one application without the other. The fact is we can find them (using a General Electric borescope that can detect surface defects down to .001 inches) and repair them, and demonstrated this to the California Coastal Commission and its independent engineering experts. As for the claim the metallic overlay process is "unproven," it's been used in several industries, including oil and gas, shipping, transportation, automotive and the military.

Regarding maintaining the spent fuel pools, the NRC has expressly considered such a requirement and has rejected it. It does not require decommissioned plant sites to maintain a spent fuel pool, because it is not necessary to ensure public health and safety. Also, doing so would seriously impede the effort to restore the site for future other uses. Taking a canister back to the spent fuel pool for unloading is not the optimal way to handle a degraded canister. Contrary to Mosko's claim, SCE's preferred method for dealing with a degraded canister is the repair method, mentioned above. This method is detailed in the Inspection and Maintenance Program the Coastal Commission approved in July.

To mislead readers about San Onofre's safety record, Mosko borrows a chart that's eight years old. The latest numbers are easily available from the NRC website. From 2016 through August of this year, San Onofre had six allegations reported to the NRC by on-site sources. Two were substantiated, and one had a regulatory response. This is an important aspect of overall nuclear safety. Employees must feel comfortable going to the NRC at any time. Embracing programs like this is one reason nuclear energy is the safest form of energy generation in the world, and SCE certainly does embrace it.

Mosko is simply wrong about the dry storage system choices other countries are making to store their spent nuclear fuel. Since 2014, Brazil, Mexico, Slovenia, South Africa, Ukraine, and the United Kingdom have selected welded-lid canisters such as those used at San Onofre. In the U.S., these nuclear plant sites have chosen welded-lid canisters since 2014: Beaver Valley, Callaway, Clinton, Crystal River, Pilgrim, South Texas Project, V.C. Summer, and Watts Bar.

The mention of the Swiss facility is curious. The Swiss facility is an interim storage location for all of Switzerland, so it's not surprising that it has a hot cell that can be used to repackage fuel. One of the reasons the Swiss need a hot cell is to replace the seals on their bolted lid casks, the kind Mosko advocates for. Welded-lid canisters are leak-tested and don't use seals, or O-rings. In other words, they are designed not to be opened. Ever. The Swiss, once they have a permanent geologic repository, will have to repackage all of that fuel, at additional risk and cost, using the hot cell. In this country, we are working toward direct disposal of existing canisters, such as those used at San Onofre. Repackaging, if it were to occur, would take place at a centralized Department of Energy facility, not at San Onofre.

The bottom line to all of this is that the federal government still has the responsibility to pick up the fuel from San Onofre, and other nuclear plant sites, and relocate it to a geologic repository. Consistent with this, the nuclear energy industry, following DOE guidance in the 1990s, began storing its spent fuel in welded-lid canisters that are transportable. More than 80 percent of the spent fuel at San Onofre is eligible for transport now, and the rest by 2030. It doesn't have to be re-packaged. SCE doesn't need to build a "hot cell." We don't need "thick-wall casks." We need the federal government to act. And we need fact-based discussions about spent nuclear fuel storage.

John Dobken is the public information officer for the San Onofre Nuclear Generating Station, or SONGS.

Opinions expressed in community opinion pieces belong to the authors and not Voice of OC.

Voice of OC is interested in hearing different perspectives and voices. If you want to weigh in on this issue or others please email opinions@voiceofoc.org.

Thank you,

Lorraine Sandstrom

Community Affairs and Relations, Senior Specialist
Community Engagement Panel (CEP) Management and Stakeholder Engagement (AWS Bldg. D-D23)
Southern California Edison, San Onofre Nuclear Generating Station (SONGS)

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