Compilation of Recent CEP Communications
8/22/19 to 10/17/19

Key Permit Approved to Enable SONGS Dismantlement

From: Manuel Camargo
Sent: Thursday, October 17, 2019 6:07 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Jerry Kern; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo; Jammal CIV Osamah A
Cc: Doug Bauder; Gabaldon, Joseph M; John Dobken; Julie C Holt; KELLI GALLION; Kevin Walker; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Marisol Eaton (SD County); Mike Sappingfield; Scanlan, Katelin; Steve Carlson (UCSD); Tanya Flink; Ronald Pontes
Subject: Key Permit Approved to Enable SONGS Dismantlement

Good evening CEP members,

For your awareness, earlier this afternoon the California Coastal Commission unanimously approved a coastal development permit for SONGS decommissioning. The CDP enables SCE to commence the decontamination & dismantlement of the structures at SONGS. Please see the attached news release for more information.

Best regards,

Manuel

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

Attachment #1 – Crucial Milestone Achieved for Decommissioning San Onofre Nuclear Plant, SCE News Release, October 17, 2019
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The Full Story of SONGS Canister Inspection Photos

From: Manuel Camargo
Sent: Tuesday, October 15, 2019 9:22 AM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Jerry Kern; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo; Jammal CIV Osamah A
Cc: Doug Bauder; Gabaldon, Joseph M; John Dobken; Julie C Holt; KELLI GALLION; Kevin Walker; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Marisol Eaton (SD County); Mike Sappingfield; Scanlan, Katelin; Steve Carlson (UCSD); Tanya Flink; Amy F Pressler; ALBERT BATES
Subject: (New hyperlink) The Full Story of SONGS Canister Inspection Photos

(Resending this email from over the weekend with a new hyperlink)

Dear CEP Members,

I write to share the full story of high-resolution photos taken during the visual assessment of SONGS spent fuel storage canisters earlier this year. As some of you may know, opponents of SONGS publicized some of these photos earlier this week. The complete story on the photos is publicly available here.

This is an important week for SONGS decommissioning as SCE has a permit on the agenda for a California Coastal Commission meeting on Thursday morning in Chula Vista. Recall that we need this permit in order to begin dismantling the structures at SONGS, which is a key step toward eventually restoring the site and returning it to the Navy/Marines. More on the CCC meeting is available here.

Let me know if you have questions. Apologies for the multiple emails.

Best regards,

Manuel

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

Attachment – none
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Orange County News Coverage On Offsite Fuel Storage / Disposal

From: Manuel Camargo
Sent: Tuesday, October 1, 2019 7:43 AM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Jerry Kern; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Supervisor Lisa Bartlett; Ted Quinn; Tom Caughlan; Val Macedo; Bane, Dan
Cc: Ward, Kathy; Doug Bauder; Gabaldon, Joseph M; John Dobken; Juanita Hayes (SD County); Julie C Holt; KELLI GALLION; Kevin Walker; Larry Rannals; Liese Mosher; Lindsey Stigall@MSO365; Lorraine Quinn Sandstrom; Manuel Camargo; Marisol Eaton (SD County); Mike Sappingfield; Scanlan, Katelin; Steve Carlson (UCSD); Tanya Flink; Chris Thompson
Subject: FYI: News Coverage on Offsite Fuel Storage/Disposal

Hello CEP Members,

I write to share a story from the *Orange County Register* on offsite spent nuclear fuel storage/disposal. It's a solid, fact-based story. On a related note the Breakthrough Institute just published a report on the same topic and a summary and the full report are available here.

Provided for your awareness. Please also feel free to share this information with people in your network of contacts.

Best regards,

Manuel

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

Are 3-mile-deep boreholes the long-term answer for nuclear waste stalemate?

Taxpayers bleed billions while federal government mulls what to do with millions of pounds of radioactive spent fuel

By **TERI SFORZA** | tsforza@scng.com | Orange County Register
PUBLISHED: September 29, 2019 at 8:00 am | UPDATED: September 29, 2019 at 11:48 am

Among geologists, there are givens: Humans don't build things that last a million years. And only the bowels of Earth itself can be trusted to swallow — forever — the radioactive nuclear waste that humans have created.

So it was with a flush of optimism that the U.S. Department of Energy announced the Deep Borehole Field Test project in 2015. The $35 million idea was simple: Drill a test hole about 3 miles deep into Earth's crust in rugged North Dakota. Study the properties of the crystalline "host rock" buried there. Determine if it might be suitable for the mission at hand: Interning America's spent fuel canisters — including those piled up at California's San Onofre and Diablo Canyon plants — at the bottom, then sealing the hole with miles of concrete-and-asphalt plugs, never to be seen or heard from again.

Anyone familiar with the saga of Yucca Mountain knows what happened next. Folks in North Dakota said hell no, the nation's nuclear dump wasn't going in their backyard. The test project migrated to South Dakota, where it got a similar reception.

In 2016, the DOE, intent on garnering public support, shifted its focus to New Mexico and Texas, stressing that the experimental borehole would not include any real nuclear waste. But in 2017, the DOE threw up its hands, saying that priorities had changed and the deep borehole project was defunded.

Result: Some 6 million pounds of spent nuclear waste, generated over a half-century, remain in seismically sensitive spots on the California coast, at both San Onofre and Diablo Canyon. That's among some 200 million pounds of radioactive waste languishing at 80 reactor sites in 35 states from sea to shining sea, where it will remain for the foreseeable future.

"We've so tainted this whole process because of fear," said James Conca, a controversial nuclear energy advocate with a doctorate in geochemistry from the California Institute of Technology. "You get everyone so scared you never do anything.

"Look, we know where to put this stuff," he said. "We've known for 60 years. We have an operating deep geologic repository right now — but it's only for bomb waste."

Conca looked out the window at the Holtec dry storage system causing such controversy at the shuttered San Onofre nuclear plant. A federal lawsuit demands that operator Southern California Edison halt transfers of waste from cooling pools to dry storage immediately. Critics say the canisters holding the waste aren't thick enough, and worry about what will happen to scratches they endured on the descent into the vaults over decades to come.

'You want it out of state'

Holtec's concrete monolith is more than robust enough to keep San Onofre's waste safe and secure for decades, Conca said. But over the long term, California's really not the right place for it.

"You want it out of the state," he said. "Your focus should be on the state Legislature, the governor's office, Congress, demanding action. Stop the nonsense of scaring the heck out of everyone."

Meantime, paralysis picks taxpayer pockets. Every year that the DOE delays taking custody of commercial fuel costs another $500 million. To date, the federal government has had to pay $7 billion to utilities for this failure — money that's paying for dry storage systems such as Holtec's at San Onofre — and the U.S. Government Accountability Office says it will cost some $28 billion more before a long-term solution is found.

What is that long-term solution? Yucca? Boreholes? Something else? The questions have moved front and center as more waste is "stranded" at closed sites like San Onofre, but the answers remain maddeningly unclear.

No green goo

The popular consciousness has been shaped by rare tragedies like those at working reactors Chernobyl and Fukushima, by Homer Simpson and glowing green goo, by

family games like “Meltdown,” where players pile squishy goop atop a cooling tower and stack green cubes on it until everything collapses.

The industry is trying to push back on misconceptions.

“Homer Simpson is great fun, but sorry, there’s no green goo,” said Matt Wald, a spokesman for the Nuclear Energy Institute, a utility trade group. “The fuel is a solid. It starts out as a ceramic pellet in a metal tube, and that’s how it ends. It’s a bit like a double-A battery — when it’s done, it looks like it did when it started.”

The spent fuel, Wald said, takes a “a long, slow trip” from its radioactivity in isolated storage. Inside a cask, the physics is carefully calculated to ensure a chain reaction won’t happen. “And that includes if the cask were submerged because you had sea level rise, a storm surge, a tsunami,” he said.

“There are no moving parts. It’s cooled by natural convection. There are no pumps to fail. They are filled with inert gas, which means there’s no oxygen, no oxidation, meaning rust. They’re built for the long haul — there’s no green goo waiting to be liberated and take its revenge on mankind.”

While more than 2,000 people died in the chaos following the Fukushima disaster, none was attributed to acute radiation syndrome. That tragedy sprang from a poorly designed plant where working reactors failed — not from its passive spent fuel storage systems, Conca said.

“If these storage systems are dangerous, where are all the dead?” he said. “No one has died from spent nuclear fuel.”

That the waste is secure might be part of the sluggishness, Wald said. “The problem is important, but not urgent,” he said.

Laws of man, laws of nature

Nuclear power was once viewed as the nation’s future, and Congress passed the Nuclear Waste Policy Act of 1982 to encourage its development. The federal government promised to accept and dispose of spent commercial nuclear fuel and high-level waste beginning Jan. 31, 1998; in return, utility customers made quarterly payments into a disposal fund to pay for it.

Utility customers pumped about $750 million a year into that fund, now valued at some $40 billion. The feds, however, have not accepted an ounce of commercial nuclear waste for permanent disposal.

Why? The Nuclear Waste Policy Act specifies that waste is to be interred in Yucca Mountain in Nevada. The plan is to store it less than a half-mile below surface, with canisters retrievable for 50 to 100 years. This despite the fact that Nevada doesn’t

have any nuclear power plants, and is adamantly opposed to hosting America's nuclear waste, and vows an eternal fight to keep it out.

Geochemist Conca, for his part, said the volcanic rock at Yucca isn't good for this job anyway. The rock in New Mexico and West Texas, however, is geologically quiet, far from the water table and uniquely suited for deep borehole storage, which is many times deeper than Yucca. All of the nation's commercial nuclear waste would fit in an area of no more than two square miles.

Lawmakers should take Yucca off the table, forget the 50-year retrievable requirement — America has been steadfastly against reprocessing nuclear fuel, so what's the point? — and get on with building a civilian version of the Waste Isolation Pilot Plant in New Mexico, where defense nuclear waste is permanently disposed of in an underground salt bed more than 2,000 feet below the surface.

The Nuclear Energy Institute — like many people in Southern California — won't give up on Yucca.

"Our read, and the Nuclear Regulatory Commission's read, is that Yucca is suitable," spokesman Wald said. "And it's the law of the land. The Nuclear Waste Policy Act says, 'Thou shalt build at Yucca.' "

Conca says the country shouldn't be so wedded. "It's easier to change the laws of man," he said, "than the laws of nature."

Inching forward

As it turns out, there's not much going on at Yucca, the NRC said. The appropriations bills under consideration in Congress for fiscal year 2020-21 don't have any funding for the project right now.

"My view is that Yucca Mountain is probably a non-starter," said David Victor, co-director of UC San Diego's Laboratory on International Law and Regulation and chair of the volunteer San Onofre Community Engagement Panel. "But the regulatory process and the political process need to come to that conclusion, and, meanwhile, we do not need to hold the rest of the country's nuclear waste strategy hostage. That's why interim storage is so important."

The NRC is, indeed, pushing forward with plans for temporary storage sites that could accept waste from San Onofre, Diablo Canyon and the rest while the federal government tortures out the big-picture solution.

Applications for "consolidated interim storage facility" licenses from Holtec in New Mexico and Interim Storage Partners in Texas are in process, said spokesman David McIntyre, with draft environmental impact statements expected to be published in March and May for public comment.

In California, such temporary sites are viewed as the quickest way to get waste off the beach.

U.S. Rep. Mike Levin, D-San Juan Capistrano, introduced a bill that would give San Onofre's waste priority when moving time comes, and is pushing for $25 million in federal funding to further plans for temporary storage. The Senate Appropriations Committee included funding for a pilot interim storage program in the energy and water funding bill.

"I'm hopeful that this is the year Congress will finally break the stalemate on dealing with nuclear waste," said Sen. Dianne Feinstein, who has been working on the issue for years, in a statement.

"Spent nuclear fuel continues to sit in places like San Onofre and Diablo Canyon because we don't have a realistic national plan of what to do with it," she said. "Our interim storage pilot program is a critical step toward consolidating the 80,000 metric tons of spent fuel around the country and preparing it for long-term storage in communities that agree to accept it."

Deep borehole technology — first explored as a long-term solution in 1957 — returns to the spotlight. A Berkeley company called Deep Isolation made waves with a public demonstration of its technology in January — putting a twist on the miles-deep, vertical borehole by curving it horizontally at the bottom, which could isolate waste even further. It has partnered with Bechtel National, part of the largest engineering and construction company in the nation.

"I believe the deep borehole technology may be good as a technology, but it has not been explored and vetted to the extent necessary for submittal to NRC as a viable licensing basis," said Ted Quinn, a past president of the American Nuclear Society who is also on the Community Engagement Panel.

That may just be a matter of time.

"The public has to push if it wants to solve this problem, or the waste will stay where it is," Conca said. "Projects are under way in New Mexico and West Texas. You should say, 'What do you want to take this stuff, New Mexico and Texas?' And you should give it to them."

Attachment – none
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SCE Motion to Dismiss Public Watchdogs Lawsuit

From: Manuel Camargo
Sent: Friday, September 20, 2019 7:04 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Jerry Kern; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Marni Magda; Martha
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McNicholas; Paul Wyatt; Rich Haydon; Supervisor Lisa Bartlett; Ted Quinn; Jammal CIV Osamah A; Val Macedo; Bane, Dan
Cc: Doug Bauder; Gabaldon, Joseph M; John Dobken; Julie C Holt; KELLI GALLION; Kevin Walker; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Marisol Eaton (SD County); Mike Sappingfield; Scanlan, Katelin; Steve Carlson (UCSD); Tanya Flink; Ward, Kathy; LOU BOSCH; JERRY STEPHENSON; William V Law Walsh
Subject: SCE Motion to Dismiss Lawsuit

Good afternoon CEP members,

I write to make you aware that SCE today filed a motion to dismiss a lawsuit brought by Public Watchdogs in the U.S. District Court for the Southern District of California in San Diego and an opposition to a request for temporary restraining order and preliminary injunction as part of the same lawsuit. The lawsuit focuses on spent nuclear fuel storage here at SONGS and sought an immediate halt to our fuel transfer operations through a temporary restraining order. The court did not rule on the restraining order and instead set a Sept. 20 deadline for filing additional legal briefs.

SCE maintains that the lawsuit is wrong on the law and wrong on the science and on the engineering of spent fuel storage. As you are aware, we at SCE are working to get the fuel safely into passive dry storage as a required step toward eventually shipping it to a federally approved repository. We believe the lawsuit is a barrier to achieving this goal. SCE wants the fuel removed, which is consistent with what most members of the community tell us they want.

In July, Public Watchdogs withdrew a similar lawsuit after being given a chance to amend the complaint by the court. The same federal district court judge is hearing their latest lawsuit. Public Watchdogs' lawsuit challenges a 2015 NRC license amendment. Notably, Public Watchdogs did not challenge, or even participate, in that licensing process.

The attached news release includes a list of factual errors in the lawsuit and supporting evidence to correct the record, including topics such as the Aug. 3 canister lowering event, canister integrity, and incidental canister contact.

We will keep you apprised of further developments on this matter.

Best regards,
Manuel

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

Attachment #2 - SCE Files Motion to Dismiss Lawsuit Over Spent Nuclear Fuel Storage, SCE News Release, Sept. 20, 2019

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Public Watchdogs Legal Motion Regarding SONGS

From: Manuel Camargo
Date: August 30, 2019 at 8:20:59 PM PDT
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Jerry Kern; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Supervisor Lisa Bartlett; Ted Quinn; Jammal CIV Osamah A; Val Macedo
Cc: Doug Bauder; Gabaldon, Joseph M; John Dobken; Juanita Hayes (SD County); Julie C Holt; KELLI GALLION; Kevin Walker; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Manuel Camargo; Marisol Eaton (SD County); Mike Sappingfield; Scanlan, Katelin; Steve Carlson (UCSD); Tanya Flink; Linda Anabtawi
Subject: FYI - Motion regarding SONGS
Hello all,

Just want to make you aware of a filing today by a local organization which is addressed on a website available here. Following is a statement from the team at SCE on the matter:

> *This latest effort by Public Watchdogs runs counter to the expressed interest of the communities adjacent to the San Onofre nuclear plant by potentially stranding spent fuel on site, even when options for transport and off-site storage or disposal become available.*
>
> *Placing spent nuclear fuel into approved canisters that meet all technical, safety and regulatory requirements for on-site storage is the first step to relocating the fuel to an off-site, federally licensed facility. The local communities near San Onofre have made it abundantly clear that storing the fuel safely on site and then moving the fuel to such a facility as soon as possible is their strong desire and in their best interest. SCE shares these objectives and is working diligently towards achieving them. By 2021, more than 80 percent of the spent fuel stored at San Onofre will be eligible for transport off-site. Being ready means having all fuel safely in dry storage and in transportable canisters.*

Best regards,
Manuel

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

Attachment - none
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CEP Officers Visit Holtec International, Inc.

From: David G. Victor
Sent: Monday, September 30, 2019 12:22 PM
To: Pierre Oneid; Kris Singh; Jerry Kern; Daniel T. Stetson
Cc: Kevin Walker; Doug Bauder; Manuel Camargo; Tom Isaacs; David G. Victor
Subject: (External):thank you for the visit to Camden

Dear Kris and Pierre

I write, on behalf of the CEP leadership, to thank you and your team for your excellent hospitality earlier this month. We very much look forward to our continued work together. Attached is a more formal thank you.

With all best wishes
David

David G Victor
Co-Director, Deep Decarbonization Initiative at the School of Global Policy and Strategy and the School of Engineering
Professor & Director, Laboratory on International Law & Regulation, School of Global Policy & Strategy, UC San Diego
Professor of Climate, Atmospheric Science & Physical Oceanography, Scripps Institution of Oceanography (Adjunct)
9500 Gilman Drive #0519
La Jolla, CA 92093-0519 USA
tel: +1 (858) 534-3254
facsimile: +1 (858) 822-3550
David.victor@ucsd.edu

Attachment #3 – CEP Leadership to Holtec Leadership – thank you letter from CEP Officers, Sept. 30, 2019

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California Coastal Committee Meeting Postponed

From: Manuel Camargo
Sent: Monday, September 09, 2019 5:43 PM
To: Captain Mel Vernon; Daniel T. Stetson; David G. Victor; Donna Boston; Garry Brown; Jerry Kern; Jim Desmond (SD County Supervisor); Jim Leach; John Taylor (SJC City Council); Marni Magda; Martha McNicholas; Paul Wyatt; Rich Haydon; Supervisor Lisa Bartlett; Ted Quinn; Val Macedo; Jammal CIV Osamah A
Cc: Doug Bauder; Gabaldon, Joseph M; John Dobken; Juanita Hayes (SD County); Julie C Holt; KELLI GALLION; Kevin Walker; Larry Rannals; Liese Mosher; Lindsey Stigall; Lorraine Quinn Sandstrom; Marisol Eaton (SD County); Mike Sappingfield; Scanlan, Katelin; Steve Carlson (UCSD); Tanya Flink
Subject: CCC Meeting Postponed

Hello CEP Members,
~~~~~~

The California Coastal Commission (CCC) announced this afternoon that consideration of SCE's Coastal Development Permit (CDP) for SONGS decommissioning on September 12 has been postponed, because the Nuclear Regulatory Commission was unable to attend the meeting. The postponement was unexpected.

SCE remains committed to working with the Commission and staff on securing the CDP in the near future, hopefully during the CCC meeting next month in Chula Vista. We will keep you informed on details once they are available.

Best regards,

Manuel

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

Attachment - none
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David Victor's Testimony before NRC on Nuclear Energy Innovation and Modernization (NEIMA) and Community Advisory Boards

Attachment #4 – Testimony of Prof. David G. Victor, Chairman of the San Onofre Community Engagement Panel, before the Nuclear Regulatory Commission Community Meeting on Section 108 of the Nuclear Energy Innovation and Modernization Act in San Juan Capistrano, CA, August 29, 2019

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EPRI Report Corrects NRC Miss-statement Re: Tank Thru-Wall Crack in 17 Years

From: Manuel Camargo
Sent: Thursday, August 22, 2019 3:30 PM
To: David G. Victor
Cc: Lorraine Quinn Sandstrom; RANDALL GRANAAS
Subject: RE: (External): FW: (External):Re: (External):Re: Following up on last night's NRC meeting in San Juan

Hi David,

Yes, we can and will include the EPRI report that corrects the NRC misstatement about 17 years in the next circulate. The report is attached. For the SONGS website, we will provide a direct link to the report.

Manuel

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

From: David G. Victor
Sent: Thursday, August 22, 2019 6:12 AM
To: Manuel Camargo
Subject: (External): FW: (External):Re: (External):Re: Following up on last night's NRC meeting in San Juan

M

Can we get this epri report into next circular, or is it restricted?

D

Direct Link provided here - Aging Management Guidance to Address Potential Chloride-Induced Stress Corrosion Cracking of Welded Stainless Steel Canisters - EPRI Technical Report (2017)
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Public Comment by Patricia Borchmann

From: Patricia
Sent: Thursday, August 22, 2019 12:38 PM
To: Liese Mosher
Cc: Ray Lutz; Madge Torres; Donna Gilmore; Kale Walker; Steve Horn; Mcdonald, Jeffrey
Subject: (External):Public Comment - CEP Panel Meeting 08 22 19 Thursday 5:30 pm

Please circulate **email with my public comments in advance of CEP Panel Meeting tonight 08 22 19** to all CEP Panel members, SCE, Holtec, nuclear industry consultants, elected officials and media .
Please reply by email to confirm you receive this email, and agree to circulate. Thank you in advance

Sent from Mail for Windows 10

PUBLIC COMMENT – CEP PANEL MEETING 08 22 19, Thursday 5:30 – 8:30 pm, Laguna Hills Community Center
CEP Panel Members, Licensee (SCE Edison), Contractor (Holtec International), elected officials, stakeholders and media -

It is imperative for NRC, CEP Panel, Licensee (Edison) and Contractor (Holtec) to **not apply** more fuzzy math, or any more fantasy formula forecasting in Decommission Plan for San Onofre. Stakeholders in reactor communities near SONGS deserve, and demand public transparency, accountability and verifiable evidence applied by regulators, licensee and contractors to fully demonstrate engineering accuracy, and technical adequacy of SCE Decommission Plan's scope, funding, and full compliance with

mandates for protection of public health and safety, and application of best practices. In other words, partial compliance is not good enough.

So to establish a baseline starting point, the Holtec Hi-Storm Umax MPC multipurpose canisters begin as 5/8" inch thick stainless steel, single layer pressurized vessels to serve as containers for storage of high burn-up fuel, with no pressure relief valves.

A following excerpt from **San Onofre Safety.org** website defines the ASME pressure vessel code limit for up to 75% though-wall crack allowance before canisters must be removed from service:

NUREG-1927 Rev. 1[14] states if canisters have a 75% through-wall crack (ASME pressure vessel code), they must be taken out of service. Canisters are being loaded so hot (~30Kw and higher), they can no longer meet their license requirement to be able to return fuel back to the pools in order to take the canisters out of service. With no adequate inspection or repair technology in place, and an inability to return fuel to the pools, the likelihood of through-wall cracks is real. Some canisters are already 25 years old, so we are on borrowed time. The older canisters with stainless steel cladding may not explode. But the canisters with zirconium hydrides are at higher risk of explosions. And either one will go critical if water enters the canisters while in dry storage or transport.[15]

So the ASME pressure vessel code established the **first** initial safety reduction on the primary defense in depth physical containment boundary, allowing up to 75% though wall penetration in the thickness of the 5/8" thick Holtec canister.

Then in late 2018, the NRC Special Investigation after the August 2018 'near miss' cask misloading incident led to NRC assessment on extent of cask scratches/gouging during cask downloading, since there is only ¼" quarter-inch clearance between canister exterior surface and the guide plate (inner ring). With cask transporter, and physical concealment by cask alignment mating device, onsite cask load workers/supervisors do not have direct visual view during downloading as understood, so it is common that multiple manipulations are required and multiple contacts may be necessary as each cask is downloaded.

Even after NRC required Licensee Holtec and Contractor Holtec to develop more extensive training, supervision, oversight, more thorough procedures and Corrective Action Plan, plus assignment of more on-site staff for constant oversight during downloading, it is still not a precision laser-like cask alignment process, **nor is it certain** that **'the thin 2 nanometre oxide layer will self-heal',** as expected from surface scratches that are not considered 'safety-significant' by NRC regulator.

You are reminded that even microscopic scratches can remove the thin 2 nm (nanometer) layer of chromium oxide film on stainless steel containers, which when scratched creates pitted surfaces by mechanical means, that can initiate chloride induced stress corrosion cracking.

The NRC analysis, process and findings were described during a **Public Webinar** a few months ago, which was basis for **NRC decision that authorized Licensee Edison to resume loading** spent nuclear fuel from spent fuel pools to Holtec dry storage canisters at ISFSI at San Onofre. During that

Compilation of Recent CEP Communications
8/22/19 to 10/17/19

NRC Public Webinar, NRC staff introduced the **next new allowance to amend the FSAR Final Safety Assessment Report for San Onofre SONGS**. The NRC regulator authorized the **new allowance for surface scratches on exterior of Holtec canisters up to 10% of cask thickness.**

So – although I am not an engineer, basic math and the history/evolution at SONGS indicates that the combined safety reductions (75% though-wall penetration allowed by ASME pressure vessel code, plus additional 10% penetration recently allowed by NRC to amend SONGS Final Safety Assessment Report FSAR), these combined reductions result in regulatory approval by NRC for through-wall penetrations up to 85% of the 5/8" inch thick exterior wall of Holtec canisters. Critics say Holtec 5/8" thick casks cannot be maintained, monitored, and depths of cracks cannot be quantitatively measured, and damaged fuel cannot be repaired, or replaced into spent fuel pool at San Onofre**. If that is an incorrect observation, I request immediate clarification now tonight at this CEP Panel Meeting, by experts at this important public meeting.**

If this is a generally accurate observation, allow me to assert this most recent 10% safety reduction announced at NRC Public Webinar should be revoked, and instead stakeholders in reactor communities consider a formal License Amendment by Southern California Edison is necessary before additional fuel loading takes place, and further cask loading operations at San Onofre should be suspended until then. I recommend further cask downloading work be suspended during interim until all aspects can be considered.

Lastly, you are reminded that CEP Panel, NRC and nuclear industry consultants often place excessive reliance on this **mysterious 'margin of safety'**, however this so-called safety margin has never been officially quantified in any public documents to my knowledge (and I have searched). I've often seen references to 'sufficient margin of safety' in NUREG documents, Interim Guidance documents, and correspondence by NRC regarding San Onofre, but one **never** sees any mathematical basis, or quantitative analysis that defines 'margin of safety', or tracks it from a baseline condition (starting point) to current real time condition at San Onofre, so it's been exploited as an analytical safety cushion that has been over-used. Over decades, there have been countless occasions when this 'margin of safety' has been incrementally reduced at San Onofre that many stakeholders recall, but has never been quantified. Serial reduction by NRC of safety margin at SONGS is not acceptable, ethical, or legal.

I wish to point out article in Mining Awareness today 08 21 19 indicates stakeholders near Pilgrim nuclear reactor that are represented by League of Women Voters protest transfer to Holtec, and an earlier article that provides evidence there is insufficient funding for the Pilgrim Decommission Plan. In the public record for San Onofre, there is already plenty of evidence in the public record that the same arguments apply here**. My closing statement is the ONLY thing new action by NRC should be to require Edison (or parent company Sempra) to immediately fund construction of an on-site hot cell at San Onofre SONGS, for construction BEFORE demolition of spent fuel pool at SONGS. The SONGS Decommission Plan is underfunded, and needs to be re-considered, along with License Amendment for SONGS, and an on-site hot-cell.**

Plymouth League of Women Voters Sends Letter of Protest to NRC Re Plans to Approve Transfer of Pilgrim Nuclear Power Station to Holtec Inc.

Healey: Pilgrim decommissioning may be underfunded

June 3, 2019   Pilgrim, Wicked Local

Thank you for thoughtful consideration of my public comments tonight.   Patricia Borchmann (Escondido)

Attachment – none

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