

Community Engagement Panel Regular Meeting

SONGS Spent Fuel Storage Defense-In-Depth and Decommissioning Update

Thursday, August 17, 2023

6:30 - 8:30 p.m. PDT

Onsite at the San Onofre Nuclear Generating Station and via Microsoft Teams link available on the CEP meeting webpage at songscommunity.com

Agenda Topic	Presenter(s)	Time
Registration for access to SONGS owner-controlled area		5:00 – 5:30
SONGS public tour and decommissioning update		5:30 - 6:30
 CEP and SCE opening comments CEP onsite tour and hybrid meeting Future CEP meeting formats 	David Victor Doug Bauder	6:30 – 6:35
 CEP general community update Spent Fuel Policy Working Group CEP Leadership Succession 	David Victor Dan Stetson	6:35 – 6:40
 SONGS decommissioning update The big picture Decommissioning update 	Doug Bauder Vince Bilovsky	6:40 – 6:50
 Spent fuel dry cask storage: defense-in-depth Defense-in-depth updates Update on transportation licenses for the two storage systems at SONGS Inspections of dry cask storage systems at SONGS and industrywide 	Jerry Stephenson Randall Granaas	6:50 – 7:05
Break		7:05 – 7:10
General public comment period		7:10 – 8:10
Facilitated public dialogue	Dan Stetson Martha McNicholas	8:10 – 8:25
SCE and CEP summary comments	Doug Bauder David Victor	8:25 – 8:30

Opening Comments





- CEP onsite tour and hybrid (in-person/virtual) meeting
 - Tour of SONGS to encourage participation
 - Meeting is live streamed via Microsoft Teams and the link is available on the August 17 CEP meeting webpage at songscommunity.com
- CEP meeting format (in-person-only vs. hybrid) considerations:
 - CEP member poll regarding meeting format found hybrid option offers a level of convenience and optionality versus in-person-only meetings
 - Continuing with hybrid in-person/livestream is preferred by a majority members and will continue for the time being
 - **Pros**: In-person meetings offer face to face interactions, connection among participants, and reduces potential for online technical issues. CEP comment cards are available to sign up for public comment. Questions may be submitted at the meeting or online before, during, and after the meeting.
 - **Cons**: In-person-only meetings may limit availability and adds travel to time which may prohibit attendance of some CEP members, guest speakers, and the general public from attending. While livestream feature provides online public viewing, it does not provide for verbal interaction during public comment. Comments would be limited to written format.

Public Comment Period



Instructions for meeting participation available online

Submitting comments and questions in advance

• Up to 2 days prior to the meeting, comments may be submitted by e-mail to nuccomm@sce.com, (these receive priority)

Participating in public comment during meeting

Submit written comments and questions or sign-up for oral comment using the <u>CEP Comment Form</u>

Instructions for meeting participation in-person

Submitting comments and questions for in-person meetings

CEP comment / question cards are available at the facility entrance

Participating in public comment during meeting

Sign up to speak at the facility entrance

Public dialogue to be facilitated by Dan Stetson and Martha McNicholas



General Community Updates

David Victor



CEP Community Updates

David Victor and Dan Stetson

Spent Fuel Policy Working Group

CEP Leadership Succession

SONGS: The Big Picture

Doug Bauder

Vice President & Chief Nuclear Officer





Decommissioning Principles

SAFETY



ENGAGEMENT









Major Workstreams

- Dismantling above-ground structures
 - 2 Safely managing spent fuel onsite

3 Advocating for offsite storage /disposal

Resources

Learn about decommissioning

www.songscommunity.com



Staying informed

- Community Engagement Panel meeting dates
- Public walking tour dates and sign ups
- Decommissioning blog and news updates
- SONGS monthly community update email
- Facebook, Twitter, YouTube, Instagram

SONGS Dismantlement Update

Vince Bilovsky

Director

Decommissioning Project



Decommissioning Work Activities

- Inside containment domes and power block buildings
 - Class B and C¹ waste packaging and shipments
 - Complete cutting of greater than class C (GTCC) reactor vessel internal (RVI) segments
 - GTCC packaging, processing, and transfer to independent spent fuel storage installation (ISFSI)
 - Start removal of large components, including Reactor Vessels
 - Preparation for demolition of auxiliary buildings
 - Removal of spent fuel racks in Unit 3
- Outside work
 - Continued class A waste, recycling, and landfill shipments
 - Complete intake structure final status surveys and backfill

¹Low-level radiological waste is characterized as Class A (most benign), B, C, or Greater-Than-Class C (GTCC); GTCC is most highly activated and stored much like spent fuel



Dismantlement Project Schedule: Key Activities

- In progress - Pending work	20	23	2024	2025	2026	2027	2028
U2/3 RVI Segmentation - GTCC							
U2/3 RV Segmentation							
U2/3 Large Components							
& Systems Removal							
Auxiliary Buildings - Demo							
U2/3 Containment Domes - Demo							
Remove Utilities & Final Backfill							
Final Status Survey - Report							

Demo - Demolition

FSS - Final Status Survey

GTCC - Greater Than Class "C" Waste

RV - Reactor Vessel (pressure vessel that houses reactor core and internal structures)

RVI - Reactor Vessel Internals (components that secured fuel in place during operation)







Dry Cask Storage: Defense-In-Depth

Jerry Stephenson

SCE ISFSI Engineering Manager

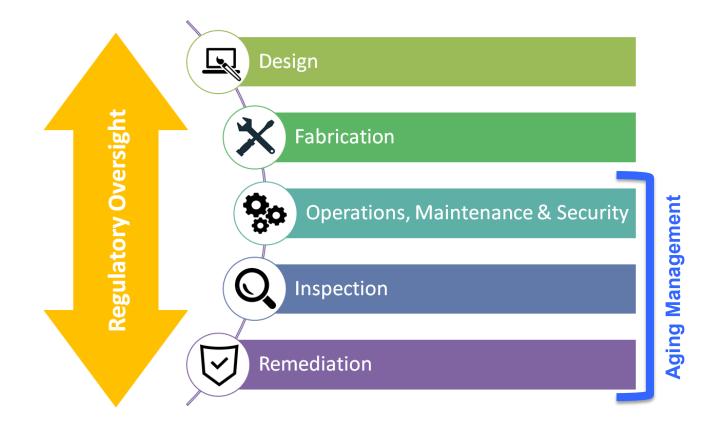
Randall Granaas

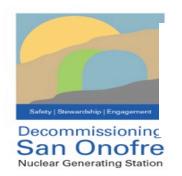
SCE Nuclear Fuel / ISFSI Engineer



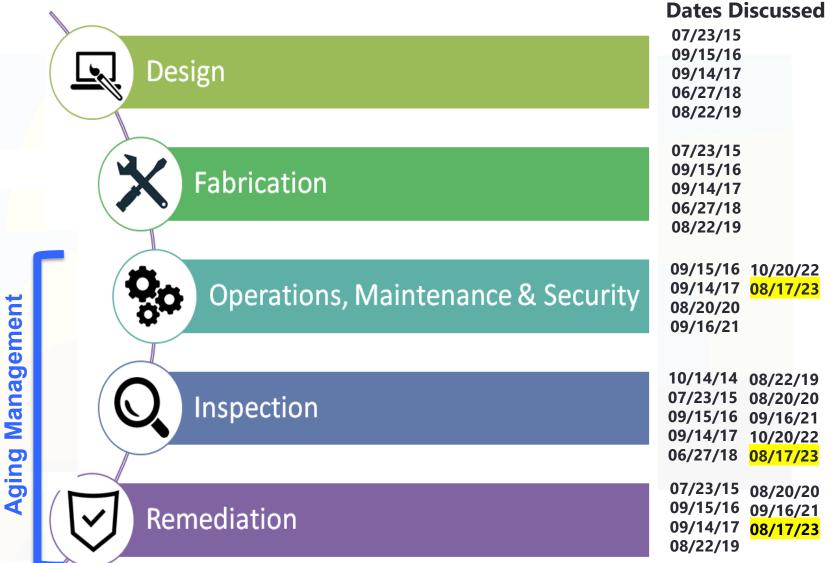
Dry Cask Storage Defense-in-Depth

(dry fuel storage)





Ongoing Focus on Dry Spent Fuel Storage Defense-In-Depth



A link to the history of previous defense-in-depth topics is provided here.

Tonight's Defense-in-Depth Updates

Operation:

 Readiness of SONGS spent fuel and GTCC waste canisters for shipping

Inspection:

- Addressing recent questions regarding implementation of recommendations from independent reviewer for Holtec system
- Recent and upcoming inspections industrywide and at SONGS

Remediation:

R&D to assess various potential canister repair methods







Last of SONGS Spent Fuel Canisters will Qualify for Offsite Transportation by 2030

	NOW	'24	'25	'26	'27	'28	'29	'30	Total
Units 2/3 AREVA NUHOMS 24PT4	33								33
Unit 1 AREVA NUHOMS 24PT1	3					5		9	17
Units 2/3 HOLTEC MPC-37	71		1			1			73

All GTCC Waste Canisters at SONGS are now Licensed for Transportation

 Revision 11 of Certificate of Compliance 71-9302 approved in January of 2023, adds Greater-Than-Class-C (GTCC) waste canisters used at SONGS

Vendor	Canister Model	Stores	Certificate of
			Compliance (CoC)
Orano-TN	24PT1	Unit 1 fuel	71-9255
Orano-TN	24PT4	Units 2 & 3 fuel	71-9302
Holtec	MPC-37	Units 2 & 3 fuel	71-9373
Orano-TN	Radioactive Waste	Greater-Than-Class-C	71-9302
	Container (RWC)	Waste from all 3 units	



Spent Fuel vs GTCC Waste Storage Canisters

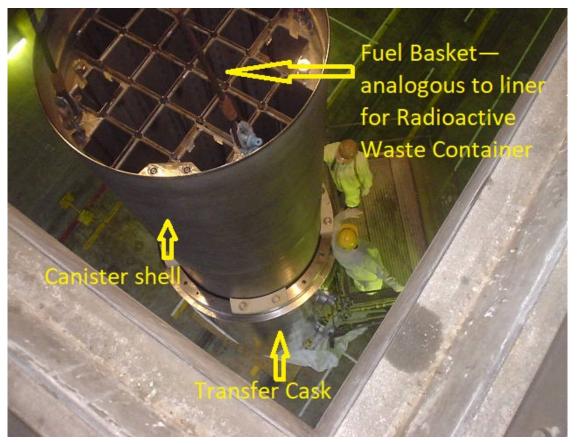
- Spent fuel and fuel inserts stored in spent fuel canisters
- NRC rules prohibit mixing spent fuel and GTCC waste within a canister, with the exception of inserts stored in the fuel (e.g., control rods used to stop the fission process)
- Fuel canister:
 - Fuel basket placed in canister shell
 - Canister placed in transfer cask
 - Fuel loaded in fuel basket
 - Canister within transfer cask sealed, processed and transferred to storage location

- GTCC waste canisters contain only activated metals:
 - "Activated" means metal made radioactive by neutrons from fission
 - No spent fuel stored in GTCC waste canisters:
 - No fission products from the splitting of uranium or plutonium, such as Cesium-137 or Strontium-90, are stored in GTCC waste canisters
- GTCC waste canister:
 - "Furniture" placed in liner
 - GTCC waste loaded in furniture
 - Canister placed in transfer cask
 - Loaded liner placed in canister within transfer cask
 - Canister within transfer cask sealed, processed and transferred to storage location



"Nesting"

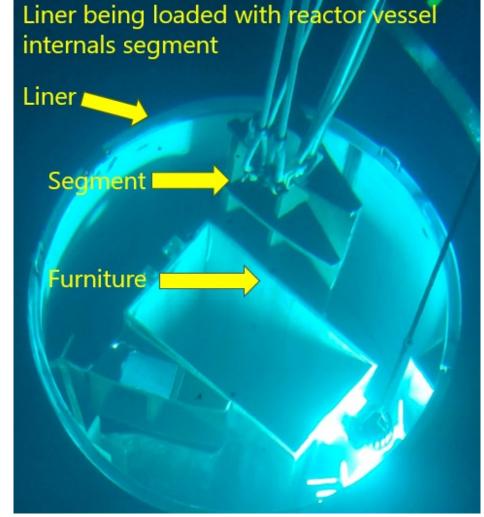
Spent Fuel Canister



Lid installed after GTCC liner loading is complete.

Entire liner lifted and placed in canister shell, which is inside (nested in) the transfer cask.

GTCC Liner



GTCC Waste Canister Liner and Furniture

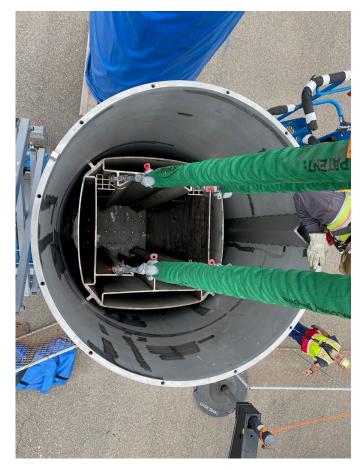


With "furniture" installed, analogous to fuel basket shown on previous slide



"Furniture," used to arrange and support reactor vessel internals segments, staged for installation in liner.





"Furniture," used to arrange and support reactor vessel internals segments, placed inside a liner.



Spent Fuel vs GTCC Waste Storage Canisters

Model	Vendor	Storage CoC	Transpor- tation CoC	Stores	Shell Thickness	Shell Material	Seismic Rating	Weld Areas Laser Peened?	Comments
24PT1	TN	72-1029	71-9255	Unit 1 fuel	5/8"	316L SS	1.5g horizontal/ 1g vertical	No	
24PT4	TN	72-1029	71-9302	Units 2/3 fuel	5/8"	316L SS	1.5g horizontal/ 1g vertical	No	
MPC-37	Holtec	72-1040	71-9373	Units 2/3 fuel	5/8"	316L SS	1.5g horizontal/ 1g vertical	Yes	
RWC (GTCC Waste)	TN	N/A	71-9302	GTCC waste	5/8"	316L SS	1.5g horizontal/ 1g vertical	No	Conservatively designed, fabricated, and processed same as a spent fuel canister.

- Unit 1 GTCC waste canister has same external dimensions as 24PT1 canister (Unit 1 fuel)
- Units 2/3 GTCC waste canisters have same external dimensions as 24PT4 canister (Units 2/3 fuel)
- Shell is same thickness (5/8") and same material (316L stainless steel)
- Processed and stored similarly



Why Does GTCC Waste Use a Liner?

- Loading a canister with fuel typically takes 6-8 hours
- Loading a liner with GTCC waste can take days or even months:
 - Loading of several GTCC waste liners may occur in parallel
- Several transfer casks would be necessary to support parallel loading of liners:
 - Leaving the transfer cask submerged in reactor cavity water for an extended period would make decontaminating the cask surface much more difficult and time consuming
 - Canister cannot be left in the reactor cavity water outside of the transfer cask, as the outside of the canister must remain free of radioactive contamination
 - Liners can be left in the reactor cavity water for extended periods, as they will be sealed inside the canister shell
- Liner also provides additional shielding for gamma radiation



Addressing a question: SCE's Inspection and Maintenance Program (IMP) for Holtec system

- Intended to ensure Holtec multi-purpose canisters (MPCs) stored in the ISFSI will remain in a physical condition sufficient for onsite transfer and offsite transportation
- Submitted by SCE to California Coastal Commission (CCC) on 3/31/2020
- Reviewed by California Commission staff:
 - Independently reviewed by engineering consulting firm Lucius Pitkin Inc.
 - Lucius Pitkin provided 4 recommendations
- California Coastal Commission staff recommended approval of the IMP (with Lucius Pitkin recommendations incorporated) on 6/12/2020
- California Coastal Commission approved the IMP on 7/16/2020
- Assertion made during recent CEP meetings that SCE is not implementing all recommendations from Lucius Pitkin





All 4 Recommendations by the Independent Engineering Firm were Accepted by SCE

- 1. The IMP should include a flaw depth of 0.0625" (1/16") as the threshold for fuel canister repairs such that flaws deeper than 0.0625" would be repaired:
 - 90% of the shell wall remains at a 0.0625" (1/16") threshold; 0.0625" represents 10% of the 0.625" (5/8") thick shell
 - Nominal shell thickness is 0.5" (1/2"); therefore, ASME¹ code allowance would be 0.45" (10% reduction in wall thickness)
 - SCE specified an additional 1/8" shell thickness to the nominal design for a total of 5/8"; therefore, SCE's position is up to 0.175" is allowable (0.625"-0.450" = 0.175")



^{1/16&}quot; (0.0625") vs 5/8" (0.625") shell

¹ American Society of Mechanical Engineers

Lucius Pitkin Recommendations (4) Accepted by SCE

- 1. (continued) The IMP should include a flaw depth of 0.0625 as the threshold for fuel canister repairs. Flaws deeper than 0.0625 inches would be repaired:
 - Lucius Pitkin notes limiting flaw depth to 0.0625" ensures a flaw will not penetrate the 0.080" (minimum) deep compressive residual stress provided by laser peening of the weld areas
 - Chloride induced stress corrosion cracking (CISCC) cannot occur if tensile stress is not present—i.e., cannot occur within the 0.080" (minimum) deep compressive residual stress region
 - Therefore, SCE agreed with Lucius Pitkin's recommended 0.0625" threshold for canister repair

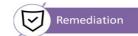
Lucius Pitkin Recommendations (4) Accepted by SCE

- 2. SCE should employ a more appropriate statistical method to model the maximum depth of canister scratches that may occur during insertion and extraction of the canisters into the ISFSI vertical storage modules and update the statistical analysis in the future to incorporate data from additional canister inspections:
 - Lucius Pitkin recommended use of an "extreme value" statistical analysis, rather than "normal distribution"
 - SCE contends "normal distribution" is more appropriate but agreed to this recommendation
 - SCE plans on using both methods to evaluate future canister inspection results
- 3. Assess how future canister unloading operations (i.e., when canisters are moved to a different location) can be optimized to minimize canister wear depths:
 - SCE agreed to this recommendation and has partially addressed the recommendation by improving alignment during the download process
 - SCE has no foreseeable plans to perform unloading operations (e.g., no facility to ship fuel to)
- Correct a typographical or miscalculation error in a supporting document related to the potential scratch depths on fuel storage canisters:
 - Lucius Pitkin noted a minor error in the statistical analysis related to potential scratch depths, which was corrected



Industry R&D

- Funding for Yucca Mountain deep geologic repository was terminated in 2009, leading to realization spent fuel will be stored at reactor sites longer than originally intended, possibly much longer
- Research focused on potential long-term issues associated with extended storage and transportation of spent fuel
- Shortly after 2009, first "gap analysis" performed to identify and evaluate potential longterm issues:
 - Compares existing knowledge base to credible aging mechanisms
 - For example, fuel known as "high burnup" was initially identified as a potential long-term concern
 - · Research performed since the first gap analysis has alleviated initial concerns about high burnup fuel
 - No immediate or near-term concerns about safety of spent fuel storage
 - SCE will report out on ongoing research as it is completed
- Research led by DOE, National Labs, universities, Electric Power Research Institute and private industry



Industry R&D: Evaluating Potential Mitigation and Repair Methods for Multipurpose Canisters

- Electric Power Research Institute Technical Report "Investigation of Advanced Coating Technologies for Mitigation of Chloride-Induced Stress Corrosion Cracking" (3002023825) examined several methods:
 - Cold spray
 - Arc welding
 - Inorganic coating
 - Liquid metal
 - Geopolymer
- Methods were evaluated for:
 - Leak tightness after sealing lab-created CISCC cracks
 - Salt fog, tests for sensitivity to chloride induced stress corrosion cracking
 - Slow Strain Rate Testing (SSRT), evaluates effectiveness of coating protecting a specimen in a corrosive environment
 - Electrochemical corrosion
 - Adhesion
 - Atmospheric exposure





Industry R&D: Cold Spray Found to be Leading Repair Method

- Arc welding cannot be deployed remotely inside storage modules
- Liquid metal unable to develop a sufficient bond
- Geopolymer coating had relatively low strength and completely ineffective at sealing the stress corrosion cracks
- Among non-metallic material, Restochem inorganic coating had best overall performance, selected for further evaluation and development:
 - Adhesion must be improved, additional work necessary to improve application procedures and ensure consistent adhesion
- Cold spray (metallic overlay) still found to be the leading mitigation and repair method



Cold spray (a.k.a. metallic overlay) nozzle attached to robot applying coating on canister mock-up at vendor facility





SCE Leading Industry in Defense-in-Depth and Inspections

- Specified thicker shell for canister (5/8" vs. nominal 1/2")
- Specified more corrosion resistant material for canister confinement boundary shell (316L stainless steel vs. 304 stainless steel)
- Specified higher seismic rating for dry storage systems used as SONGS (1.5g horizontal)
- Laser-peening of weld areas of Holtec dry storage canisters, essentially eliminating the potential for CISCC (no tensile stress to cause cracking)



SCE Leading Industry in Defense-in-Depth and Inspections

- Inspection and Maintenance Program (IMP) for the Holtec system:
 - Exceeds NRC requirements, only site in the U.S. inspecting dry storage system during the initial 20 years of operation
- Heated test canister (first-of-a-kind), leading indicator of canister corrosion
- NUHOMS system inspected per NRC-approved aging management program
- SCE developed *Metallic Overlay* (first-of-the-kind) to remotely repair a crack in the canister confinement boundary, in the unlikely event of a crack ever occurring
- Inspection Ring for the NUHOMS system (first-of-a-kind), enhanced inspection and repair capability



Installation of SONGS Heated Test Canister



Q Inspect

Inspections of Dry Cask Storage Systems at SONGS and Industrywide

Upcoming SONGS inspections:

- Heated test canister in Holtec UMAX storage module in Spring 2024, and
- 2. Two Holtec MPCs with spent fuel in Spring 2024, and
- 3. Two NUHOMS canisters with spent fuel in 2026

Recent and upcoming industrywide inspections:

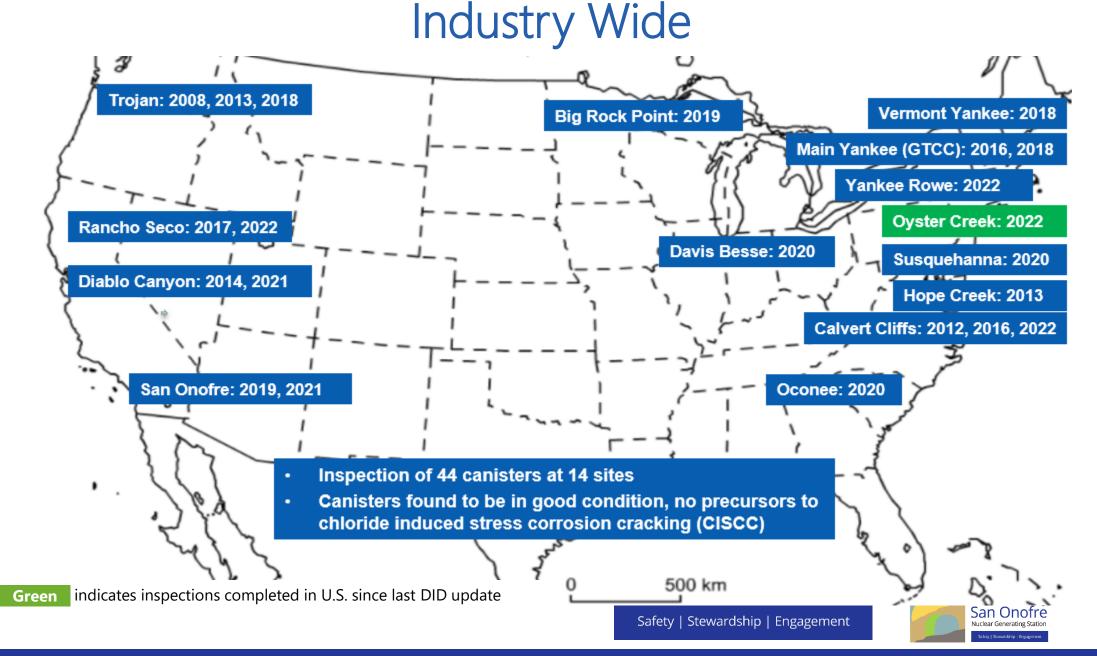
- Two additional canisters inspected at Oyster Creek since previous DID meeting (October 20, 2022)
- Holtec HI-STORM 100 systems at five sites slated for inspection in 2023





Increasing Number of Inspections





SCE Participating in a Number of Industry Forums Related to Dry Fuel Storage and Transportation

- EPRI Extended Storage Collaboration Program (ESCP):
 - Utilities, Regulators, Universities, DOE and National Laboratories, Research Organizations, Vendors, International Atomic Energy Agency (IAEA), Nuclear Energy Institute (NEI), Nuclear Waste Technical Review Board (NWTRB), others
 - As of 2021, 750 members from 22 countries
 - SCE co-chairs Mitigation and Repair subcommittee
- NEI Dry Storage Task Force
- NEI Used Fuel Transportation and Consolidated Interim Storage Task Force
- ASME Task Group for Mitigation and Repair of Spent Nuclear Fuel Canisters
- TN (NUHOMS system) Users Group
- Holtec (UMAX system) Users Group



Public Comment David Victor



Directions for the public comment period:

To submit comments and questions in writing:

- Use the <u>CEP Comment Form</u> if participating online
- Use hardcopy CEP Question/Comment Card if participating in person
 - Cards available at the facility entrance and at the back of the room

To sign up to speak:

- Use the <u>CEP Comment Form</u> if participating online
- Sign-up to speak at the facility entrance

Comments and questions will be addressed in the order received

Dan Stetson and Martha McNicholas will facilitate

SAN ONOFRE COMMUNITY ENGAGEMENT PANEL

BREAK

Speaker Queue:



General Public Comment

Sign up to speak using the <u>CEP Comment Form</u> online or CEP Comment Card if attending in-person



CLOSING COMMENTS DOUG BAUDER



KEY TAKEAWAYS DAVID VICTOR AND DAN STETSON



2023 CEP Meeting Schedule (subject to change)

Focus Topics	Date
1Q CEP Regular Meeting Environmental Stewardship	March 23
CEP Member Consultation Meeting	May 31
2Q Joint CEP-Spent Fuel Solutions Meeting DOE Funding to Support Community Engagement on Consent-Based Siting of Consolidated Interim Storage	June 15
3Q CEP Regular Meeting Tour of SONGS Decommissioning SONGS Spent Fuel Dry Cask Storage Defense-In-Depth	August 17
4Q CEP Regular Meeting Department of Energy Spent Fuel Transportation Update SONGS Dismantlement Update by SONGS Decommissioning Solutions	October 26
CEP Member Consultation Meeting	December 7

2024 CEP Meeting Topics (subject to change)

	•
Focus	Innics
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1Q CEP Regular Meeting

Environmental Stewardship

CEP Member Consultation Meeting

2Q CEP Regular Meeting

Update on Consent-Based Siting for Federal Consolidated Interim Storage Facilities

3Q CEP Regular Meeting

Onsite Spent Fuel Dry Cask Storage Defense-In-Depth

4Q CEP Regular Meeting

SONGS Dismantlement Update by SONGS Decommissioning Solutions

CEP Member Consultation Meeting





Thank you Stay safe and healthy

Acronyms

ACM	Asbestos Containing Material
AHSM	Advanced Horizontal Storage Module
ALARA	As Low As Reasonably Achievable
AMP	Aging Management Program
ASME	American Society of Mechanical Engineering
C&D	Cold & Dark
CAP	Corrective Action Program
CCC	California Coastal Commission
CBS	Core Barrel Support
CCR	Current Conditions Report
CDP	Coastal Development Permit
CDPH	California Department of Public Health
CEC	California Energy Commission; Cavity Enclosure
	ainer
CEP	Community Engagement Panel
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH&S	Corporate Health & Safety
CIS	Consolidated Interim Storage
CNO	Chief Nuclear Officer
CPEN	Camp Pendleton
CPUC	California Public Utilities Commission
CSLC	California State Lands Commission
D&D	Decontamination & Dismantlement
DA	Decommissioning Agreement; Decommissioning Agent
DCE	Decommissioning Cost Estimate
DGC	Decommissioning General Contractor
DGCL	Derived Concentration Guideline Levels
DID	Defense-in-Depth
DOE	Department of Energy
DoN	Department of Navy

DOR DPH	Division of Responsibility Department of Public Health
DSAR	Defueled Safety Analysis Report (replaces FSAR)
DSC	Dry Storage Canister
D-SEIS	Draft Supplemental Environmental Impact Statement
D-SER	Draft Safety Evaluation Report
DSFM	Division of Spent Fuel Management (NRC)
DTF	Decommissioning Trust Fund
DTSC	Department of Toxic Substances Control
EAL	Emergency Action Level
EH&S	Environmental, Health & Safety
EIR	Environmental Impact Report (under CEQA)
EIS	Environmental Impact Study (under NEPA)
EP	Emergency Plan
EPA	Environmental Protection Agency
EPRI	Electric Power Research Institute
ERO	Emergency Response Organization
ET	Experts Team
FA	Fuel Assembly
FEIR	Final Environmental Impact Report
FERC	Federal Energy Regulatory Commission
FSAR	Final Safety Analysis Report
FSS	Final Status Surveys
FSSR	Final Status Survey Report
FTO	Fuel Transfer Operations; Field Training Officer
GTCC	Greater Than Class C (Waste)
HAZ	Heat Affected Zone
HI-TRAC	Holtec International Transfer Cask
	Holtec International Transporter
	Holtec International Storage Module
HSM	Horizontal Storage Module

Acronyms

IOEP	ISFSI-Only Emergency Plan
IPC	Interjurisdictional Planning Committee
IRMS	ISFSI Radiation Monitoring System
ISA	Industrial Security Area
ISFSI	Independent Spent Fuel Storage Installation
LAR	License Amendment Request
LLRW	Low-Level Radioactive Waste
LOED	Large Organism Exclusion Device
LTP	License Termination Plan
MARSSIM	Multi-Agency Radiation Survey Site & Investigation
	Manual
MOU	Memorandum of Understanding
MPC	Multi-Purpose Canister
NDTF	Nuclear Decommissioning Trust Fund
NEI	Nuclear Energy Institute
NEPA	National Environmental Policy Act
NOP	Notice of Preparation
NOV/IO	Notice of Violation and Investigative Order
NPDES	National Pollutant Discharge Elimination System
NPP	Nuclear Power Plant
NRC	Nuclear Regulatory Commission
NTP	Notice to Proceed
NUREG	Nuclear Regulation
NUHOMS	Nutech Horizontal Modular Storage
OC	Orange County
O&M	Operation & Maintenance
OE	Operating Experience
OSHA	Occupational Safety & Health Administration
PA	Protected Area
PDEP	Permanently Defueled Emergency Plan
PDTS	Permanently Defueled Technical Specifications
PPE	Personal Protective Equipment
PSDAR	Post-Shutdown Decommissioning Activities Report

Q&A	Questions and Answers
REIR	Request for Environmental Impact Review
REMP	Radiological Environmental Monitoring Program
RP	Radiological Protection
RPV	Reactor Pressure Vessel
RSI	Request for Supplemental Information
RV	Reactor Vessel
RVI	Reactor Vessel Internals
RWQCB	Regional Water Quality Control Board
SCE	Southern California Edison
SD	San Diego
SDDEH	San Diego Department of Environmental Health
SDS	SONGS Decommissioning Solutions
SFP	Spent Fuel Pool; Support Foundation Pad (ISFSI)
SFPI	Spent Fuel Pool Island
SLC	State Lands Commission (CA)
SLR	Sea Level Rise
STP	Sewage Treatment Plant
SWPPP	Storm Water Pollution Prevention Plan
T&D	Transmission & Distribution
TBA	To Be Announced
TBD	To Be Determined
TEDE	Total Effective Dose Equivalent
UFSAR	Updated Final Safety Analysis Report
UGS	Upper Guide Structure
UT	Ultrasonic Testing
UU	Unrestricted Use
VCT	Vertical Canister Transporter
VLLW	Very Low-Level Waste
VRS	Volume Reduction Station
WHI	Wheeler North Reef (Marine Mitigation)