

Community Engagement Panel Regular Meeting

SONGS Dismantlement Update

Thursday, November 13, 2025 5:30 – 8:30 pm PT via Microsoft Teams Link available on the CEP meeting webpage at songscommunity.com

Agenda Topics	Presenter(s)	Time
 CEP and SCE Opening Comments Welcome, how to submit questions, sign up for public comment Topics being presented and read-only content SONGS "Big Picture" - decommissioning principles, major workstreams and schedule 	Dan Stetson, CEP Chair Fred Bailly, SCE VP of Generation and Chief Nuclear Officer	5:30 – 5:40
 CEP General Community Updates CEP Educational Seminar Irvine City Council Study Session 	Dan Stetson	5:40 – 5:50
 SoNGS Dismantlement Update Safety Dismantlement plan and timeline Major work activities 	James Peattie, SCE General Manager, Site Operations	5:50 – 6:15
NRC Regulatory Compliance	Mark Morgan, SCE Regulatory Affairs Manager	6:15 – 6:25
 SONGS Environmental Update Tritium monitoring Department of Toxic Substances Control Audit - November 4 	Ron Pontes, SCE Environmental Oversight and Site Closure Manager	6:25 – 6:35
Break		6:35 – 6:40
Public Comment Period and Facilitated Dialogue	Victor Cabral Martha McNicholas	6:40 – 7:40
CEP and SCE Closing Comments	Dan Stetson Fred Bailly	7:40 – 8:00
 Contents of Appendix - Read Only Topics and Reference Materials: Spent Fuel Solutions update SONGS liquid batch release update 		2

Public Comment

Dan Stetson

Directions for the public comment period:

To submit comments and questions in writing:

Use the <u>CEP Comment Form</u>

To sign up to speak:

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Comments and questions will be addressed in the order received

Victor Cabral and Martha McNicholas will facilitate



SONGS: Big Picture

Fred Bailly

SCE Vice President of Generation and Chief Nuclear Officer

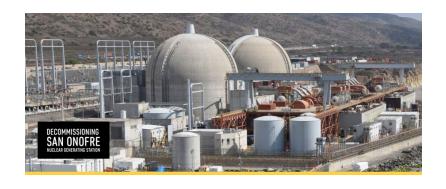
Decommissioning Principles (more <u>here</u>)

- 1. Safety
- 2. Stewardship
- 3. Engagement

Major Workstreams

- 1. Dismantling above ground structures
- 2. Safely managing spent fuel onsite
- 3. Advocating for offsite storage and disposal

Current Phase of Dismantlement on Schedule for Completion YE2028





General Community Updates Dan Stetson

CEP Members

Dan Stetson



CEP Officers	Organization				
Dan Stetson, Chairman	Trustee and Executive Director, Nicholas Endowment				
Honorable Victor Cabral, Vice Chairman	Council Member, City of San Clemente				
Martha McNicholas, Secretary	Community Member				
CEP Members					
Michelle Anderson	Director, Emergency Management Division, Orange County Sheriff's Department				
Mike Balsamo	SVP, Government Relations, Rancho Mission Viejo/Board Member, South OC Economic Coalition				
Garry Brown	President and CEO - Orange County Coastkeeper				
Lisa Davis	President, Capistrano Unified School District Board of Trustees				
Honorable Jim Desmond	Supervisor, San Diego County, 5 th District				
Honorable Katrina Foley	Supervisor, Orange County, 5th District				
Rob Howard	City of Oceanside, Representative				
Scott Kibbey	South Sector Superintendent, California State Parks, Orange Coast District				
Val Macedo	Business Manager, Laborers International Union of North America, Local 89				
Marni Magda	Sierra Club, Angeles Chapter				
Ted Quinn	Former President - American Nuclear Society				
Honorable John Taylor	Council Member, City of San Juan Capistrano, 4th District				
Captain Mel Vernon	San Luis Rey Band of Mission Indians				
Honorable Michael Villar	Council Member, City of Dana Point, 5 th District				
Daniel Whitley	Community Plans and Liaison Officer, Camp Pendleton				

CEP Community Updates

Dan Stetson



- CEP Educational Seminar October 16
 - During the 3Q CEP meeting on August 28, SCE was asked to consider releasing all photos from canister inspections
 - A CEP educational seminar was held on October 16 to discuss the inspection images; the canisters are in good condition, and focus efforts on clearing the site of spent fuel
 - Dr. James Burns, a materials scientist professor from the University of Virginia, reviewed the data and explained the science behind chloride induced stress corrosion cracking
 - The seminar was well attended by CEP members, the public, organizations, and the media, and an hour was dedicated to public comment and responses to questions
 - The CEP educational seminar webpage and links to canister inspection images are <u>here</u>
- Irvine City Council Study Session September 30

SONGS Dismantlement Update

James Peattie

SCE General Manager, Site Operations



Safety Overview

Industrial Safety

- Safety culture focused on compliance with programs and procedures
- Emphasis on hazard identification and situational awareness
- Over 3 million hours without a Lost-Time Accident

Radiological Safety

- Tracking to meet ALARA annual dose goal of 125 rem.
- Focus on radiological best practices



Material Handling Incident

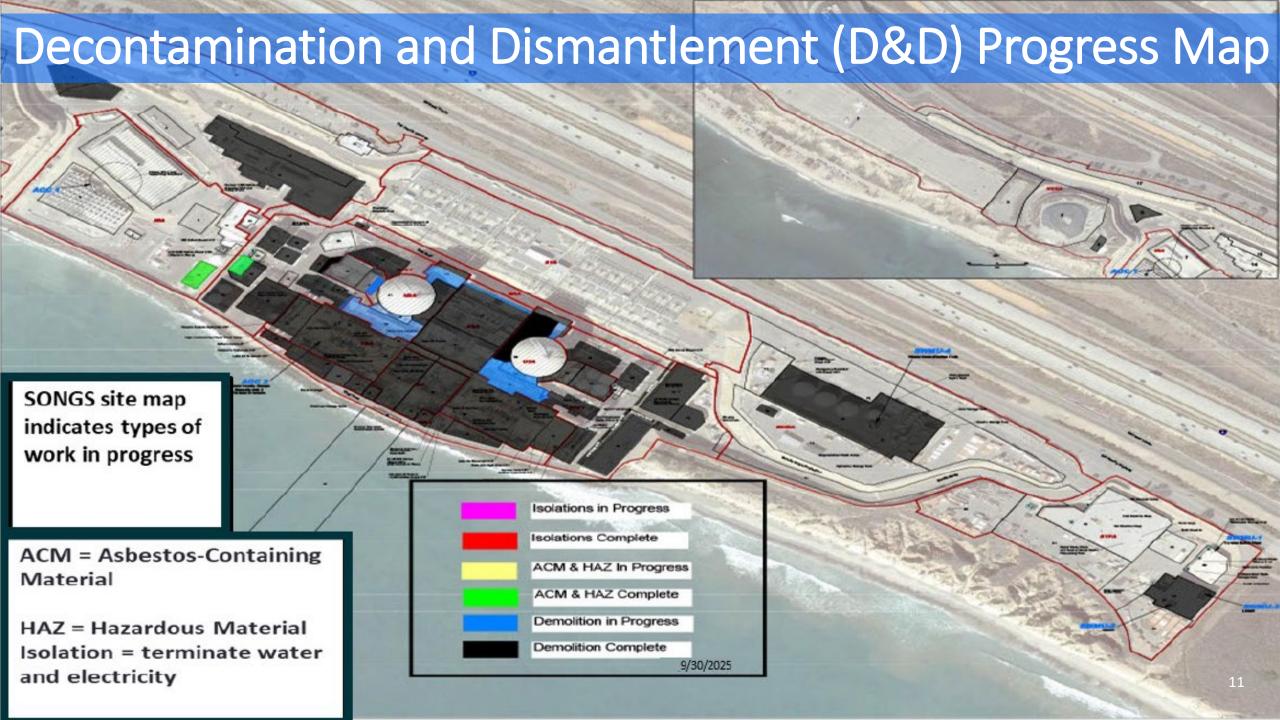
 At approximately 2300 on October 21, the Self-Propelled Modular Transporter (SPMT), experienced a rollover event while being moved from Unit 3 Containment with the Turntable

Lifting Rod (TLR) attached

No personnel injured

- Equipment was recovered with inspections in progress
- Evaluation underway to determine causes and corrective actions





Dismantlement Project Schedule: Key Activities

- In progress - Pending work	2025	2026	2027	2028	2029
Unit 2/3 RV Segmentation					
Auxiliary Buildings - Demo/Load					
Unit 2/3 Containment - Demo					
Remove Utilities and Final Backfill					
Final Status Survey					

Demo - Demolition RV - Reactor Vessel

Key Decommissioning Activities

Large Component Removal Controlled Building Demolition

Reactor Vessel (RV) Segmentation



U3 Fuel Transfer Tube Exposed for Removal



Supports will be removed after Diamond Wire Cut

U3 Fuel Transfer Tube Rigged and Removed



U2 Tank Farm Removal Complete

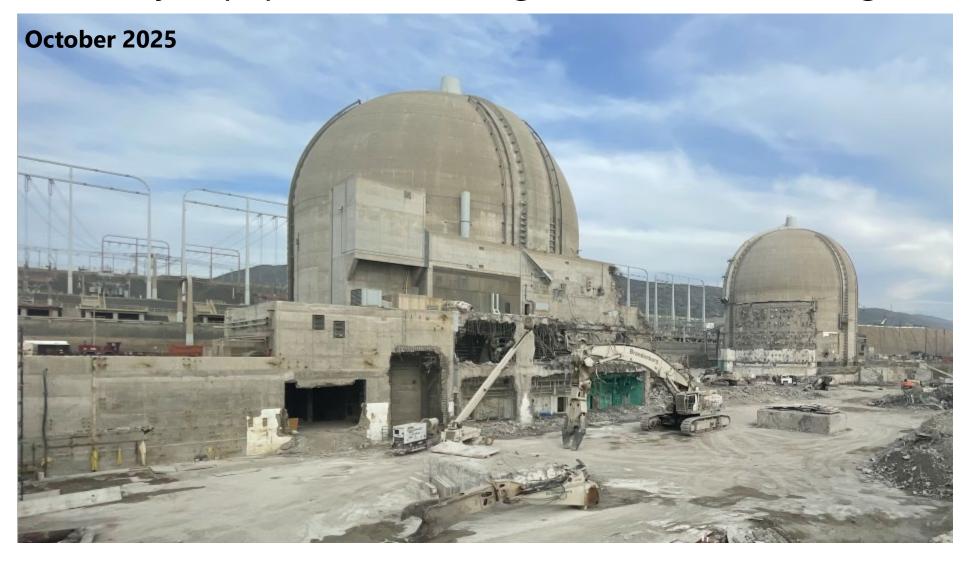




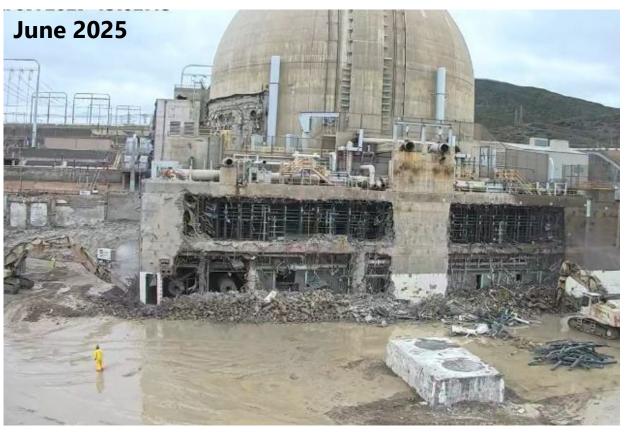
U2 Fuel Handling Building Demolition in Progress



U2 Safety Equipment Building Demolition in Progress



U3 Safety Equipment Building Demolition in Progress





U3 Decommissioning Isolation Enclosure Construction in Progress



U3 Reactor Vessel Torch Cutting Equipment Demobilization



U3 Reactor Vessel Lift System Removed from Cavity



U3 RV Waste Containers Staged for Lower Section

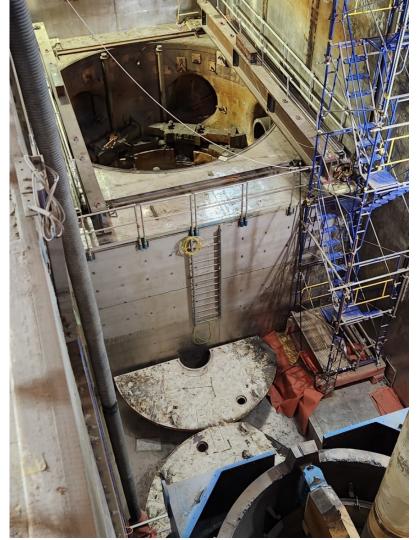


U3 Placement of RV Lower Section into Waste Containers

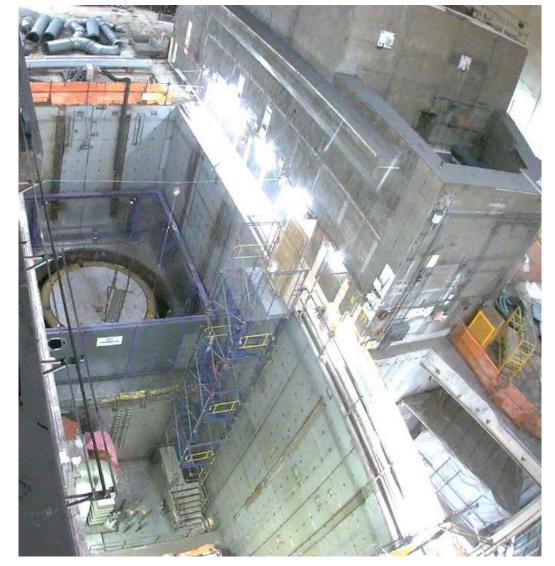


U3 Reactor Vessel Equipment Demobilization





U2 Preparations for Future Reactor Vessel Segmentation





NRC Regulatory Compliance

Mark MorganSCE Regulatory Affairs Manager



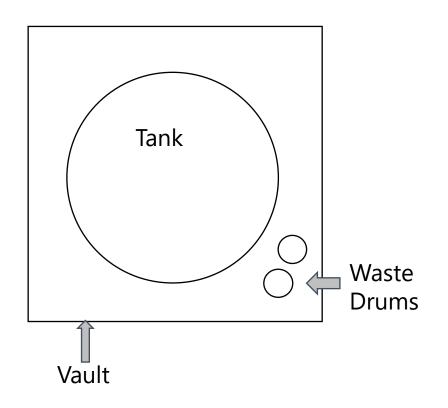
Recent Inspection Results

- July 2025 Inspection
 - Report dated September 24, 2025, ADAMS Accession #ML25253A269
 - Three violations characterized as Severity Level IV Non-Cited Violations
 - 10CFR20.1902(b) requires posting of High Radiation Areas
 - Area that should have been a High Radiation Area was posted as a Radiation Area
 - 10CFR37.11(c) requires continuous physical barriers to control access to radioactive material
 - Design issue for barrier used for Part 37 resulted in noncompliance
 - Technical Specification 5.8.2 requires control of Locked High Radiation Area
 - Design issue for barrier used for LHRA control resulted in noncompliance
 - Lowest of four severity levels (very low significance)



1st Severity Level IV Violation

- Unposted high radiation area
 - Decontamination work in large tanks
 - Radioactive material being brought out of tank and into surrounding vault, and then finally removed from the area
 - Changing conditions led to vault being downposted from a High Radiation Area to a Radiation Area
 - Additional waste was brought out and added to drums, but area was not re-posted as HRA
 - Worker entered vault on Radiation Area permit (with RP coverage) and dosimetry alarmed
 - o Worker immediately left the area, dose received was within limits of his permit



2nd Severity Level IV Violation – Access Door

- Involves an access door that is credited as a barrier for Part 37 (protection of radioactive materials) purposes
- NRC identified an issue with the design of the door
- Risk of unauthorized access was very low
 - Physical characteristics of the door
 - o Defense-in-depth of the program

3rd Severity Level IV Violation – Access Door

- Access door was credited at one point as a control to Locked High Radiation Area (LHRA)
 - LHRA is defined as an area with radiation dose rates > 1000 millirem/hr. at 30 centimeters from the source
- NRC identified an issue with the design of the door
- Alarmed
 - Review of alarm logs show no unauthorized entry
 - No overexposure of personnel

SONGS Environmental Update

Ron Pontes

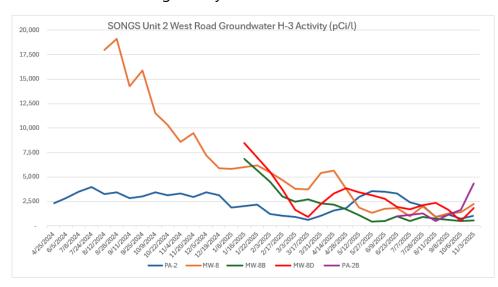
General Manager, Site Closure and Environmental Oversight



Groundwater Tritium (H-3) Update

Unit 2 Investigation (Well PA-2)

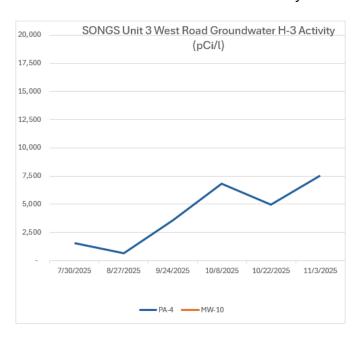
 Tritium levels in groundwater beneath San Onofre were low upon detection in summer 2024, pose no risk to public health, and while a slight upward trend has been recently observed – remain well within safe limits and are being closely monitored





Unit 3 Investigation (Well PA-4)

- H-3 detected during analysis of 3Q25 sample
- Nearby well MW-10 has not detected H-3
- Monitoring frequency for PA-4 is increased to once every two weeks and MW-10 increased to monthly



Tritium in Groundwater – Some Helpful Things to Know

- Groundwater underlying SONGS is not designated as drinking water (Ref: <u>San Diego Basin Plan</u>)
- Tritium concentration in groundwater underlying SONGS is less than the EPA drinking water limit of 20,000 pCi/l (Ref: <u>Safe Drinking Water Act (SDWA) | US EPA</u>)
- Tritium released from groundwater to the site boundary during all 2024 was 0.008 Curies (Ref: 2024 ARERR)
 - The average concentration at the site boundary was less than 100 pCi/l and the actual dose consequence is not significant compared to doses due to normal effluent releases or dose limits
 - In 2024 SONGS released a total of 28.4 Ci of tritium during monitored liquid batch releases, resulting in a total whole-body dose of 0.006 mrem (or 0.10% of the 6 mrem annual limit for SONGS)
- Detection of tritium in groundwater during decommissioning is not uncommon
 - SONGS Unit 1 (Ref: <u>Groundwater Monitoring Plan</u>)
 - Connecticut Yankee (Ref: <u>Groundwater Monitoring Plan</u>)
 - Yankee Rowe (Ref: <u>Groundwater Monitoring Plan</u>)
 - Big Rock Point (Ref: <u>Safety Evaluation for License Termination Plan</u>)
 - La Cross (Ref: <u>Groundwater Monitoring</u>)



Department of Toxic Substances Control (DTSC) Hazardous Waste Facility (HWF) Non-Minor Violation

DTSC Audit Finding

Violation: "On or about November 4, 2025, SONGS violated 22 CCR 66270.30(a) and CA H&SC 25202(a), in that SONGS failed to comply with the conditions of the Permit, *specially (sic)* Part V "Special Conditions," #5. To wit, DTSC inspectors observed the secondary containment which failed to be free of cracks or gaps in Unit "HazMat Area - South Yard Facility (SYF), Section"

Corrective Action: "SONGS shall notify DTSC officially within 24 hours when a gap, crack, or tear in the secondary containment area of HazMat Area SYF, Section A. Additionally, SONGS shall remedy the crack, gap, or tear in the secondary containment within 15 days."

Scheduled Compliance Date: November 19, 2025

SCE Evaluation

- DTSC noted several ½ inch diameter holes in the HWF HazMat Area Section A secondary containment
- Holes installed in June 2021 during radiological characterization of the HWF
- Holes vary in depth up to max 2.5 inches
- Secondary Containment is a minimum 6-inch thick, reinforced concrete pad
- The concrete pad is sufficiently impervious to contain leaks, spills and accumulated precipitation
- The secondary containment is compliant with the Part V #5 Permit condition



Hazardous Waste Facility (HWF) Non-Minor Violation

SONGS HWF Location (South Yard Restricted Area)



HazMat Area Section A Secondary Containment





Hazardous Waste Facility (HWF) Non-Minor Violation

Status of Corrective Actions

- SCE officially informed the DTSC Project Manager at 1109 PST on 11/5/2025
- SCE is on track to remedy the condition by 11/13/2025

Other Notifications

• SCE informed the NRC at 1358 PST on 11/5/2025

Discussions with DTSC

- Based on its evaluation of the condition and permit requirements, SCE respectfully requested DTSC to retract the finding
- DTSC has 65 days from the time of audit to finalize the inspection report



Public Comment Dan Stetson



Directions for the public comment period:

To submit comments and questions in writing:

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SAN ONOFRE COMMUNITY ENGAGEMENT PANEL

BREAK

Speaker Queue:



General Public Comment

To sign up to speak online use the CEP Comment Form



CLOSING COMMENTS FRED BAILLY



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 community update email
- Facebook, YouTube, and Instagram

KEY TAKEAWAYS DAN STETSON



2025 CEP Meetings and Topics (future topics subject to change)

Preliminary Focus Topics	Dates
1Q CEP Regular Meeting DOE/Pacific Northwest National Lab Site-Specific De-Inventory Report and SONGS Spent Fuel Dry Cask Storage Inspections	March 20
2Q CEP Regular Meeting SONGS Emergency Preparedness and Offsite Agency Support	June 12
3Q CEP Regular Meeting SONGS Dismantlement Update by San Onofre Decommissioning <i>Solutions</i>	August 28
CEP Educational Seminar SONGS Spent Fuel: Onsite Storage and Initiative to Relocate Offsite	October 16
4Q CEP Regular Meeting SONG Dismantlement Update	November 13
CEP Member Consultation Meeting	December 15



Thank you Stay safe and healthy

Acronyms

ACM AHSM ALARA AMP	Asbestos Containing Material Advanced Horizontal Storage Module As Low As Reasonably Achievable Aging Management Program
AREOR	Annual Radiological Environmental Operating Report
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 Container
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 DSAR DSC D-SEIS D-SER DSFM DTF DTSC EAL EH&S EIR EIS EP EPA EPRI ERO ET FA FEIR FERC FSAR FSS FSSR FTO GTCC HAZ	Division of Responsibility Department of Public Health Defueled Safety Analysis Report (replaces FSAR) Dry Storage Canister Draft Supplemental Environmental Impact Statement Draft Safety Evaluation Report Division of Spent Fuel Management (NRC) Decommissioning Trust Fund Department of Toxic Substances Control Emergency Action Level Environmental, Health & Safety Environmental Impact Report (under CEQA) Environmental Impact Study (under NEPA) Emergency Plan Environmental Protection Agency Electric Power Research Institute Emergency Response Organization Experts Team Fuel Assembly Final Environmental Impact Report Federal Energy Regulatory Commission Final Safety Analysis Report Final Status Surveys Final Status Survey Report Fuel Transfer Operations; Field Training Officer Greater Than Class C (Waste) Heat Affected Zone
	Final Status Survey Report
GTCC	Greater Than Class C (Waste)
HAZ HI-TRAC	Heat Affected Zone Holtec International Transfer Cask
Hi-PORT	Holtec International Transporter
HI-STORM HSM	Holtec International Storage Module 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
RECP	Radioactive Effluents Control Program
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	San Onofre Decommissioning Solutions
SFP	Spent Fuel Pool; Support Foundation Pad (ISFSI)
SFPI	Spent Fuel Pool Island
SLC	State Lands Commission (CA)
SLR	Sea Level Rise
SONGS	San Onofre Nuclear Generating Station
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
UT	Ultrasonic Testing
UU	Unrestricted Use
VCT	Vertical Canister Transporter
VLLW	Very Low-Level Waste
VRS	Volume Reduction Station
WNR	Wheeler North Reef (Marine Mitigation)
WHOI	Woods Hole Oceanographic Institution

Appendix – Read Only Topics and Reference Materials

- Spent Fuel Solutions coalition update
- Liquid batch release update





Coalition Update



Coalition Activities

- SFS held our Q3 webinar with Dr. Sven Bader from Orano Federal Services on Sep. 3
- Rod Baltzer from Deep Isolation/the U.S. Nuclear Industry Council's Back-End Working Group spoke at our Q4 webinar on Oct. 22
- Videos of both webinars are available on our website at <u>www.spentfuelsolutionsnow.com/events</u>
- In September, the San Clemente City Council passed a resolution reaffirming their support for SFS
- Recent additions to SFS' membership include the City of Irvine and a representative from the Prairie Island Indian Community





SONGS Liquid Batch Release Update



Understanding the Release Notification

- CA State Lands Lease PRC 6785.1 Special Provision 29.b mandates advance notification of NRC regulated batch releases to the ocean, specifying required information like date, duration, estimated volume and radiological characterization
- Total Dose is the dose to a member of the public based on radioactivity concentration in the estimated water volume to be released
- % of Annual Whole Body Dose Limit represents the cumulative dose for all releases in a calendar year, with a dose limit of 6 mrem/year for liquid releases
- SCE voluntarily updates information on releases post-completion, beyond the requirements of special provision 29.b
- Occasionally the volume of a completed release may be significantly lower than was planned. In such cases, the total dose of the release would be proportionally lower than estimated
- As a practice SCE does not update the total dose value on its website for completed releases because the total dose is already very small
- The **% of Whole Body Dose Limit** is reconciled monthly based on the actual release volumes and doses from the prior month

Release Notification

Notice Date: March 17, 2025

Est. Start Date: March 20, 2025

Volume: 60,950 gallons

Duration: 10 hours

Status: Complete

Characterization:

Total Dose: 0.000484 mrem

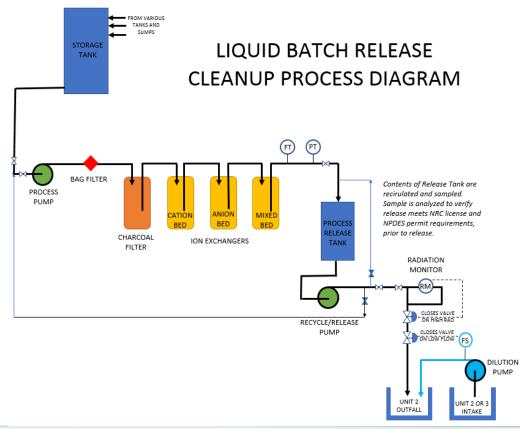
% of Annual Whole Body Dose Limit: 0.0098%

(Note: This percentage is estimated and cumulative for all releases in 2025, based on a limit of 6 mrem/year for liquid releases.)



Liquid Batch Releases Update

2025 Releases		
Month	Volume (Gallons)	
January	133,189	
January	140,450	
February	100,170	
March	60,950	
Total to Date	434,759	
Estimated 2025 to-go	75,000	
Total (Actual + to-go)	509,759	



Est. Total Dose Through March 0.000484 mrem

- Releases pose no harm to people, or the environment as supported by decades of independent monitoring
- Water is cleaned up well below SONGS NRC license requirements (<1.5 mrem/qtr. and <6 mrem/yr.)
- SONGS provides 48-hour advance notice of batch releases to the public via songscommunity.com
- "Surfrider Tests Beach Water Radiation Levels at San Onofre" See whole story and results from Woods Hole Oceanographic Institute here
- The focus topic of the March 7, 2024, CEP meeting was SONGS Environmental Stewardship, including batch releases. Click <u>here</u> for more information.



