



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 28, 2023

LICENSEE: Southern California Edison
FACILITY: San Onofre Nuclear Generating Station, Units 1, 2, and 3
SUBJECT: SUMMARY OF JULY 17-18, 2023, ROUTINE SITE VISIT AT SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3

On July 17, 2023, U.S. Nuclear Regulatory Commission (NRC) staff from Headquarters visited the San Onofre Nuclear Generating Station (SONGS), Units 1, 2, and 3. The purpose of the site visit was for the NRC License Termination Plan (LTP) technical team to:

- 1) tour the site to get a better understanding of the site layout and the relationships between facility structures, natural and engineered land features, and the ocean since their last visit in February 2022 ([ML22062B645](#))
- 2) obtain an understanding of the licensee's Southern California Edison's (SCE's) status of its characterization progress and plans particular to Unit 1 and subsurface
- 3) inquire about the licensee's plans and potential complexities for LTP development

NRC LTP Team:

Amy Snyder, Senior Project Manager
Greg Chapman, Health Physicist, CHP
Randall Fedors, Senior Hydrogeologist
Cynthia Barr, Senior Performance Analyst (remote)

SCE and Contractors:

James Madigan, et al., SCE
Steven Mannon, et al., AECOM
Sarah Roberts, et al., *EnergySolutions*

Items Reviewed by NRC or discussed with SCE:

Before the site visit, the NRC Project Manager and the SCE Licensing Manager developed the agenda (see attachment 1). The agenda also includes the meeting participants. The

NRC & Korea Institute of Nuclear Safety (KINS) Bilateral meeting was conducted at SONGS from July 17-July 20, 2023. The KINS regulators participated as observers in this site visit on July 17 through midday on July 18, 2023.

Topics that were new from the last NRC LTP technical team site visit were:

- Location of the intake and discharge conduits/structures and any onshore structures and plans and timing of their removal
- The subsurface and Unit 1 areas planned for near-term radiological characterization survey and sampling and analysis strategy
- Intermediate stage before final license termination conceptual strategy
- Groundwater program and analyses status
- Discrete Radioactive Particle contamination control at reactor decommissioning sites
- Overall LTP license amendment request (LAR) development schedule for resource planning purposes

On the first day, the meeting began with a site safety briefing, and introductions were made. SCE and its contractor, SDS, and subcontractor, *EnergySolutions*, provided an overview of the decommissioning project, including Federal, State, and local interests in the project; and intermediate and end state preliminary concept for unrestricted release. SCE then gave various presentations, as noted on the agenda.

SCE noted that the conduits are not part of the Unit 2 and 3 license. The NRC stated that in such cases, if there is licensed material residual radioactivity offsite for a Part 50 license, then the licensee would be required to provide information to the NRC for evaluation that there is no health and safety issue.

Regarding characterization of subsurface and Unit 1 areas, SCE stated that its characterization is an iterative process, and more data would be collected as remaining substructures are remediated, and structures are removed later in the project.

NRC stated that the LTP license amendment application (LAR) addresses end state. Licensees should briefly discuss intermediate states in their LTPs, but detailed intermediate clean up criteria calculations should not be presented for approval.

SCE reviewed the status and plans for its groundwater input development to include sorption coefficient (K_d) measurements of a limited number of site media samples. The NRC staff noted that licensees that provide site-specific K_d values should include a range or average value for each appropriate solid media with uncertainty information.

SCE presented contamination control practices at the decommissioning project to include open air demolition plans, construction of negative pressure structures, and attention to identification and removal of any discrete radiological particles that might be generated due to prior or certain decommissioning-related activities such as reactor internal segmentation. For the latter, the NRC noted that an information notice is being developed for reactor sites addressing how licensees should document and incorporate technical survey data into their

decommissioning strategies to avoid potential delay in license termination. This information notice is expected to be published later this year.

SCE stated that the submittal of the SONGS LTP LAR is presently anticipated in the third quarter of calendar year 2024.

The second day in the morning, SCE provided a tour of SONGS, including visiting containment and a walkdown of various areas of the site to provide a better understanding of the end state concept for unrestricted release. The site walkdown included the forebay area, the power block area, upcoming work for the foundation of the turbine building, and the south yard facility.

The site visit resulted in no action items. Please direct any inquiries to me at (301) 415-6822 or amy.snyder@nrc.gov.

Sincerely,



Signed by Snyder, Amy
on 07/28/23

Amy M. Snyder, Senior Project Manager
Reactor Decommissioning Branch
Division of Decommissioning, Uranium Recovery
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket Nos.: 50-206, 50-361,
50-362, 72-041

Attachments: Agenda,
List of Participants

Agenda
and
List of Participants

July 17-18, 2023, Site Visit - San Onofre Nuclear Generating Station

Travel Day Sunday July 16					
Day 1: Monday July 17					
Time	Activity/Topic	Presenters	Duration	Attendees	Location
0730	Arrive on Site/Badging	N/A	30 min	NRC LTP Team and Korea Institute of Nuclear Safety (KINS)	L50
0800	Welcome and Introductions Status of SONGS Decommissioning Project	J. Madigan B. Sholler	30 min	NRC and KINS	Pier North Conference Room
0830	LTP Update End State Considerations and Partial Site Release Conceptual Plans	W. Barley	1 hour	NRC Staff KINS Observation	Pier North Conference Room
0930	Offshore Conduit Plans	E. Goldin	1 hour	NRC Staff KINS Observation	Pier North Conference Room
1030	Updated Hydrological Study (Site Conceptual Model)	D. Randall	1 hour	NRC: Amy Snyder and Randy Fedors (optional KINS Hydrogeologists)	Pier North Conference Room
1130	Lunch	N/A	1 hour		Pier North Conference Room
1300 – 1400	Contamination Control, Discrete Radioactive Particles	Greg Chapman Bob Corbett		NRC Staff KINS Observation	Pier North Conference Room
1400 - 1430	Break: Region IV Inspection Entrance Meeting	Stephanie Anderson, Sr. Inspector		Jane Marshall, Division Director, DUWP; Inspection Team NRC and KINS observers	Pier North Conference Room
1430 - 1530	Review of the Day Adjourn	NRC and KINS	1 hour		Pier North Conference Room

Attachment

Time	Activity/Topic	Presenters	Duration	Participants	Location
0730	SONGS Decommissioning Status/ issue dosimetry	SCE	0.5 hour	NRC and KINS	Dosimetry
0800	Site Tour and Q&A	B. Sholler/C. Ahola	3.5 hours	NRC and KINS	Various
1130	Lunch	N/A	1.0 hour	NRC and KINS	Pier North Conference Room
1230	End of Meeting Adjourn				

List of Participants:**U.S. Nuclear Regulatory Commission:**

- Jane Marshall, Division Director, NMSS/DUWP (Mon & Tue)
- Bruce Watson, CHP, NMSS/DUWP (Sun – Fri)
- Amy Snyder, Senior Project Manager, DUWP/RDB (Sun-Tues)
- Greg Chapman, CHP, PE, Sr. Health Physicist, DUWP/RDB (Sun-Fri)
- Randall Fedors, Sr. Hydrogeologist, DUWP/RDB (Sun-Tues)
- Shaun Anderson, Chief, DUWP/RDB (Sun – Fri)
- Nathan Fuguet, New Staff/DUWP/RDB (Sun – Fri)
- Cynthia Barr, Sr. Risk Analyst, Risk and Technical Analysis Branch, NMSS/DUWP (Virtual Monday only)
- William (Chris) Allen, Project Manager, DUWP/RDB(Mon-Tues)

Korea Institute of Nuclear Safety:

- Haiyong Jung, Principal Researcher, Department of Radiation Protection & Radioactive Waste Safety
- Jeongken Lee, Principal Researcher, Department of Radiation Protection & Radioactive Waste Safety
- Yoonji Lee, Senior Researcher, Department of Radiation Protection & Radioactive Waste Safety
- Jonghyun Kim, Senior Researcher, Department of Radiation Protection & Radioactive Waste Safety
- Jiyoung Jung, Senior Researcher, PM, Decommissioning & Spent Fuel Regulation

Southern California Edison

- Ronald Pontes, General Manager, Environmental/Waste and Radiation Protection
- James Madigan, Manager, Regulatory Affairs, Nuclear Oversight & Safety Culture
- Mark Morgan, Regulatory Affairs
- Julie Holt (Site Coordinator), Public Outreach and VIP Tours
- Sandra Sewell, Manager, Radiation Protection and Waste Contract Management
- Bill Barley, Manager, Site Closure
- Eric Goldin, Project Manager, License Termination Plan
- Chris Ahola, Radiological Controls, Contract Management Specialist
- Emery Grohregin, Specialist, Final Status Survey\

AECOM:

- Steve Mannon, Decommissioning Director

SDS Participants:

- Bob Sholler, Project Manager, License Termination/Final Status Survey
- Dale Randall, Manager, License Termination/Final Status Survey
- Bob Corbett, Radiation Protection Manager

EnergySolutions:

- Sarah Roberts, *EnergySolutions*, Radiation Protection Director

SUMMARY OF JULY 17-18, 2023, ROUTINE SITE VISIT AT SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 1, 2, AND 3 DATED JULY 28, 2023

DISTRIBUTION:

RidsACRS_MailCTRResource, ACRS
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RidsRgn4MailCenterResource, RGN IV
NRC participants

Mark Morgan, SCE, mark.morgan@sce.com

ADAMS Accession No.: ML23206A206 via email

OFFICE	NMSS/DUWP/RDB	NMSS/DUWP/RDB	NMSS/DUWP/RDB
NAME	ASnyder	SAnderson	ASnyder
DATE	07/28/23	07/25/23*	07/28/23

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