

**REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**EXECUTIVE OFFICER SUMMARY REPORT  
June 20, 2018**

**ITEM 8**

**SUBJECT**

Informational Item: Presentation from Southern California Edison on the Status of the Decommissioning and the Storage of Spent Fuel at the San Onofre Nuclear Generating Station (SONGS). (*Ben Neill*)

**STAFF RECOMMENDATION**

This is an informational item and the Board will not take an action.

**KEY ISSUE**

This item provides an update on the status of SONGS decommissioning including the long-term storage of spent nuclear fuel and climate change considerations. Mr. David Asti, a Principal advisor in Environmental Policy & Affairs for Southern California Edison (SCE), will be presenting to the Board. (**See Supporting Document No. 1.**)

**PRACTICAL VISION**

San Diego Water Board engagement in the SONGS decommissioning process supports chapter 1 of the Practical Vision, *Strategizing for Healthy Waters*<sup>1</sup>, by ensuring that the chemical, physical, and biological integrity of aquatic resources within the Board's purview are maintained and protected throughout the SONGS decommissioning process.

**DISCUSSION**

SONGS is a permanently retired nuclear-fueled electric power generating facility that is now undergoing decommissioning. SONGS is located at 5000 Pacific Coast Highway, San Clemente, CA, in San Diego County. SCE is the principal owner and operator of SONGS. SCE owns 76.8% of the facility, and San Diego Gas & Electric (SDG&E) and the City of Anaheim own 20% and 3.2%, respectively.

SONGS is located immediately adjacent to the Pacific Ocean within the boundaries of the U.S. Marine Corps Base, Camp Pendleton, approximately two and one-half miles southeast of the City of San Clemente and approximately 12 miles northwest of the City of Oceanside. (**See Supporting Document No. 2.**)

SONGS discharges wastewater to the Pacific Ocean pursuant to a National Pollutant Discharge Elimination System (NPDES) permit, Order No. R9-2015-0073 (Order).<sup>2</sup> The Order authorizes the discharge of wastewater from SONGS Units 2 and 3 to the Pacific Ocean through two ocean outfalls. Wastewater from SONGS includes sewage treatment plant effluent, water collected in yard drains, groundwater, metal cleaning wastewater, makeup demineralizer water, sump water, concrete cutting water, and oil/water separator water.

In June 2013, SCE announced that it would permanently retire SONGS Units 2 and 3 and began the decommissioning process under the regulatory oversight of the U.S. Nuclear Regulatory Commission. As of October 2013, the intake flows for Units 2 and 3 were reduced by approximately

---

<sup>1</sup> The San Diego Water Board's Practical Vision is available at this website:  
[https://www.waterboards.ca.gov/sandiego/water\\_issues/Practical\\_Vision/index.shtml](https://www.waterboards.ca.gov/sandiego/water_issues/Practical_Vision/index.shtml)

<sup>2</sup> Order No. R9-2015-0073, NPDES No. CA0109282, *Waste Discharge Requirements for Southern California Edison Company, San Onofre Nuclear Generating Station, San Diego County Discharge to Pacific Ocean* is available at this website: [https://www.waterboards.ca.gov/sandiego/board\\_decisions/adopted\\_orders/2015/R9-2015-0073.pdf](https://www.waterboards.ca.gov/sandiego/board_decisions/adopted_orders/2015/R9-2015-0073.pdf)

98%. SONGS continues to utilize ocean water during the decommissioning process for the operation of the onsite spent nuclear fuel pools and to comply with the requirement to provide dilution for effluent from the on-site sewage treatment plant.

As part of decommissioning, spent (used) nuclear fuel currently stored in wet storage pools is being moved to the adjacent Independent Fuel Storage Installation (ISFSI) for dry cask storage which does not require cooling water. This technology involves sealing the used fuel in airtight steel (or in steel and concrete) containers or casks that provide both structural strength and shielding. Dry cask storage systems are designed to withstand various natural phenomena such as floods, projectiles from a tornado, seismic events, temperature extremes, and lightning.

SCE's current plans are to complete transfer of all spent fuel to the ISFSI dry cask storage by mid-2019. The spent fuel will be stored at the ISFSI until a permanent off-site storage facility is approved by the federal government. By law, the U.S. Department of Energy is responsible for developing a disposal facility for the long-term management of used nuclear fuel from SONGS and other U.S. nuclear power plants.<sup>3</sup> However, the federal government does not yet have a viable program for the long-term management of used nuclear fuel.

In October 2015, the California Coastal Commission (CCC) approved<sup>4</sup> a Coastal Development Permit (CDP) for SCE to move and store the spent fuel in dry cask storage at the ISFSI located immediately adjacent to SONGS above San Onofre State Beach. The CDP authorizes the ISFSI to remain at this location for 20 years through approximately October 2035. Citizens Oversight, Inc. challenged the CCC's permit in court, in part due to public safety concerns on the threat of a radioactive release due to the design and location of the ISFSI (*Citizens Oversight, Inc. vs. California Coastal Commission*, San Diego Superior Court Case No. 37-2015-00037137-CU-WM-CTL). On August 25, 2017, a settlement agreement was reached, which requires SCE to take specific measures to investigate alternative sites for spent fuel dry storage, to provide regular status reports, and to perform dry storage integrity inspections.

As a part of the CDP application, SCE prepared an analysis of future flood conditions due to sea-level rise over the life of the ISFSI using sea level rise projections. The analysis for the ISFSI examined changes in water level and wave run-up conditions resulting from several sea level rise scenarios at different future times. The analysis indicates that sea level can be expected to rise between 0.4 to 2.0 feet by the year 2051 depending upon which scenario is used. The ISFSI was designed to withstand any temporary inundation by flood waters based on current modeling through 2051. SCE is involved in efforts to support the establishment of an off-site storage facility including supporting congressional legislation to license Yucca Mountain in Nevada as a long-term spent fuel repository. SCE is also examining plans for interim storage locations in New Mexico and Texas.

## **PUBLIC NOTICE**

This item was publicly noticed in the Meeting Notice and Agenda for the June 20, 2018 meeting.

## **SUPPORTING DOCUMENTS**

1. SCE presentation slides
2. Location map and aerial photo of SONGS

---

<sup>3</sup> Order No. R9-2015-0073 does not regulate the use, discharge or storage of radioactive materials, including the storage or location of storage of spent radioactive waste at the Facility. The State is preempted by law from doing so.

<sup>4</sup> The California Coastal Commission's Coastal Development Permit is available at this website:  
<https://documents.coastal.ca.gov/reports/2015/10/Tu14a-10-2015.pdf>