

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

EXECUTIVE OFFICER SUMMARY REPORT

April 12, 2023

ITEM 7

SUBJECT

NPDES Permit Reissuance: Waste Discharge Requirements for Southern California Edison Company, Discharge to the Pacific Ocean Related to the Decommissioning of San Onofre Nuclear Generating Station, San Diego County (Tentative Order No. R9-2023-0011, NPDES No. CA0109282) (Joann Lim)

STAFF RECOMMENDATION

Adoption of Tentative Order No. R9-2023-0011 (Tentative Order; **Supporting Document No. 1**) is recommended.

KEY ISSUES

1. In 2013, the Southern California Edison Company (Discharger) ceased power operations and began preparations for decommissioning and dismantling of its former nuclear-fueled electric generating facility, San Onofre Nuclear Generating Station (SONGS or Facility). The Discharger anticipates terminating the discharges to the ocean by 2028 and completing decommissioning by 2051.
2. The San Diego Water Board does not have authority to regulate radioactive waste at SONGS. The regulation of radioactive waste, the decommissioning of nuclear facilities, decontamination of nuclear material, and dismantlement of SONGS are performed pursuant to regulatory requirements of the United States Nuclear Regulatory Commission (USNRC).
3. Although the Discharger eliminated the last use of oceanwater for “once-through cooling,” the continued intake of ocean water is needed for the ongoing operation of saltwater pumps to discharge wastewater from the decommissioning activities through the Unit 2 ocean outfall.

PRACTICAL VISION

Consistent with the mission of the Strategize for Healthy Waters chapter of the Practical Vision, the Tentative Order integrates all applicable technology-based requirements, water quality-based effluent limitations, and receiving water quality standards for the optimal protection of water quality and beneficial uses in the Pacific Ocean. Additionally, the Tentative Order has provisions allowing for participation in regional monitoring and assessment programs in keeping with San Diego Water Board Resolution No. R9-2012-0069, *Resolution in Support of a Regional Monitoring Framework*.

DISCUSSION

The Discharger is the principal owner of SONGS, a former nuclear-fueled electrical power generating facility located to the west of the Interstate-5 Freeway in northern San Diego County, within the boundaries of the Marine Corps Base, Camp Pendleton (see **Supporting Document No. 2** for facility map). The Facility comprises three separate

power generating units: the North Industrial Area (NIA, formerly Unit 1), Unit 2, and Unit 3. In 1992, the Discharger ceased power generation from the NIA. In June 2013, the Discharger also ceased power generation from Units 2 and 3. On June 7, 2013, the Discharger began preparations for decommissioning, decontamination, and dismantlement pursuant to regulatory requirements of the USNRC. During the process to safely remove the Facility from service and reduce residual radioactivity levels, known as the decommissioning process, the Facility continues to discharge wastewater and seawater from the NIA and Unit 2 to the Pacific Ocean through the Unit 2 ocean outfall. The Discharger is no longer discharging wastewater from Unit 3 and is no longer discharging to the Unit 3 ocean outfall. The Discharger continues to receive ocean water from Unit 2 and Unit 3 intakes for the ongoing operation of saltwater pumps to discharge wastewater from the decommissioning activities through the Unit 2 ocean outfall.

Although the continued intake of ocean water is needed for the ongoing operation of saltwater pumps to discharge wastewater from the decommissioning activities through the Unit 2 ocean outfall, the Discharger has reduced intake flows by approximately 99 percent. The Tentative Order limits the intake of seawater to 30 million gallons per day (MGD). The combined seawater and wastewater stream flows are discharged back to the Pacific Ocean through the Unit 2 ocean outfall (Outfall No. 002) and have been reduced from 56.3 MGD to 42.252 MGD.

The Tentative Order, if adopted, will supersede Order No. R9-2015-0073 (Current Order), and reissue the National Pollutant Discharge Elimination System (NPDES) permit for the Facility's discharge to the Pacific Ocean for a five-year term. The Tentative Order was developed based on information in the Discharger's permit reissuance application, self-monitoring reports, and other available sources (e.g., inspection reports, meetings, and emails with the Discharger).

The Tentative Order was noticed for a public hearing and released for public review and comment on February 2, 2023. The public comment period closed on March 6, 2023. The San Diego Water Board received 8 comment letters regarding the Tentative Order during the comment period (**Supporting Document Nos. 3 to 10**). The Discharger did not submit a comment letter. The Response to Comments Report (**Supporting Document No. 11**) includes detailed responses to the comments received and any actions taken to modify the Tentative Order in response to comments. The Response to Comments Report and the Revised Tentative Order (**Supporting Document No. 1**) were provided to the Discharger and interested parties.

The following is a summary of the most significant comments and the responses to those comments:

1. Seven of the comment letters supported the adoption of the Tentative Order.
2. One comment letter requested changes to the Monitoring and Reporting Program
 - 2.a. Comment: Change the monitoring frequency for Outfall No. 002 from semiannually to monthly to characterize the discharge and its impacts to the receiving water where there is heavy recreational use.

Response: The San Diego Water Board agrees that additional monitoring and a

trigger to increase monitoring when an exceedance occurs is warranted for parameters that have been assigned effluent limitations and has modified the Tentative Order accordingly.

2.b. Comment: Require ocean sampling for fecal indicator bacteria to monitor for accumulation of toxicants in the marine environment, especially for near shore areas with high recreational use at San Onofre State Beach.

Response: The San Diego Water Board agrees that indicator bacteria monitoring in the receiving water is warranted and has modified the Tentative Order accordingly.

2c. Comment: Require ocean sampling for toxicity and heavy metals to monitor for accumulation of toxicants in the marine environment, especially for near shore areas with high recreational use at San Onofre State Beach. Nearshore or onshore sediment sampling should be added for accumulated buildup of metals and toxicants of concern to ensure safety of nearby recreational uses.

Response: The San Diego Water Board agrees that sediment, benthic community health, and bioaccumulation monitoring are warranted and has modified the Tentative Order accordingly.

The Revised Tentative Order (**Supporting Document No. 1**) displays the changes made after the February 2, 2023, public release in red-underline for added text and red-strikeout for deleted text. Some changes have been made in response to the comment received, and other changes were made to correct minor editorial errors. One correction made was to the summary of the reasonable potential analysis (RPA) result for the final effluent (Monitoring Location EFF-002) for hexachlorocyclohexane (HCH) (Attachment F, section 4.3.3) from endpoint 1 (reasonable potential determined) to endpoint 3 (RPA was inconclusive).

SIGNIFICANT CHANGES

The following are the significant differences between the Tentative Order and the Current Order:

1. Since the Discharger ceased discharges from all Unit 3 internal waste streams and Unit 2 metal cleaning and intake structure sump, and ceased discharges to the Unit 3 ocean outfall, the Tentative Order removes discharge points related to those waste streams (i.e., Discharge Points 003, 002-A, 003-A, 003-D, 003-E, 002-J, 003-J, 003-K, 003-L, and 003-M).
2. Based on the reasonable potential analysis for the combined low-volume waste stream from the Facility, the Tentative Order adds effluent limitations for nickel and removes effluent limitations for arsenic, chromium (hexavalent), and antimony. Monitoring will still be required for arsenic, chromium (hexavalent), and antimony to determine if effluent limitations are required in the future.
3. Based on the reasonable potential analysis for the final effluent from the Facility (Discharge Point 002), the Tentative Order removes effluent limitations for nickel and zinc. Monitoring will still be required for nickel and zinc to determine if effluent limitations are required in the future.

4. The Tentative Order establishes an effluent limitation for chronic toxicity at Outfall 002 using the approach specified in the Ocean Plan and based on Ocean Plan water quality objectives for chronic toxicity.
5. The Tentative Order includes slightly more stringent mass-based effluent limitations for the combined low-volume waste stream due to the decreased low-volume waste stream flow from 12.8 MGD to 11.878 MGD.
6. The Tentative Order adds concentration-based effluent limitations for the final effluent from the Facility (Discharge Point 002).
7. The Tentative Order decreases the final effluent permitted flow to the ocean outfall from 56.3 MGD to 42.252 MGD.

PUBLIC NOTICE

The Tentative Order was noticed and released for public review and comment on February 2, 2023, with comments due by March 6, 2023. The Notice of Public Hearing and Comment Period was posted on the San Diego Water Board website for the duration of the comment period and sent to all interested parties. The Notice announced a public hearing to be held on April 12, 2023, availability of the Tentative Order for review, and provided instructions for submittal of written comments. A copy of the Notice is provided as **Supporting Document No. 12**. Notice of the public hearing on the Tentative Order was also provided in the Meeting Notice and Agenda for the April 12, 2023, San Diego Water Board meeting, which is posted on the San Diego Water Board website.

SUPPORTING DOCUMENTS

1. Tentative Order
2. Facility Map
3. Louis Bosch, P.E., Oceanside, CA, dated March 2, 2023.
4. Sara Catalan, President and CEO, Orange County Taxpayers Association, dated March 3, 2023.
5. Shaobin Fan, Electromagnetic Systems Group (GA-EMS), General Atomics, dated March 2, 2023.
6. Jack Gazza, Accident Tolerant Fuel (DOE), Program Manager, Nuclear Technologies and Materials Division, General Atomics, dated March 6, 2023.
7. Ivan Ivanov, Sciences Manager, General Atomics, dated March 2, 2023.
8. Katherin Partain, Chair, San Diego Section of the American Nuclear Society, dated March 4, 2023.
9. Bryan Starr, President and CEO, Greater Irvine Chamber, dated March 6, 2023.
10. Mandy Sackett, California Policy Coordinator, Surfrider Foundation; Katie Day, Environmental Scientist, Surfrider Foundation; and Garry Brown, Founder/Executive Director, Orange County Coastkeeper, dated March 6, 2023.
11. Response to Comments Document
12. Notice of Public Hearing