

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

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**TENTATIVE TIME SCHEDULE ORDER NO. R9-2016-0007
REQUIRING
CABRILLO POWER I LLC
ENCINA POWER STATION
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN
ORDER NUMBER R9-2016-0002
NPDES PERMIT NO. CA0001350**

The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board), finds:

FACTUAL BACKGROUND

1. The Cabrillo Power I LLC (Discharger) owns and operates the Encina Power Station (Facility), a steam electric generating facility with five steam electric generating units (Units 1 – 5), located in the City of Carlsbad, California, adjacent to the Agua Hedionda Lagoon on the Pacific Ocean.
2. The Facility discharges wastewater to the Pacific Ocean, a water of the U.S., under waste discharge requirements contained in Order No. R9-2016-0002, adopted by the San Diego Water Board on March 9, 2016. Order No. R9-2016-0002 also serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA0001350).
3. The Facility discharges once-through (non-contact) cooling water, low-volume wastes, and metal cleaning wastes to the Pacific Ocean under Order No. R9-2016-0002. Domestic wastewater is discharged to the municipal sewer system for treatment and disposal. The Facility intermittently injects chlorine into the cooling water flow to minimize the formation of biological growth in the condenser tubes. The Facility also conducts a thermal tunnel recirculation process referred to as heat treatments at five to eight week intervals which increase the temperature of the cooling water flow to remove encrusting organisms from the tunnel walls, traveling screens, and other parts of the cooling water system.
4. Cooling water from the condensers from all five steam generating units, as well as all in-plant waste streams (metal cleaning and low-volume wastes) flows into a common discharge tunnel. The concrete discharge tunnel (15 feet wide) runs along the east side of the inlet conveyance tunnels, past the traveling screen structures, then crosses under the inlet tunnels and runs parallel to the west side of the conveyance tunnels. The Poseidon Resources (Channelside) LLC, Carlsbad Desalination Project withdraws water for desalination from and discharges brine into this discharge channel. The cooling water and brine flows into a discharge pond before discharging into a riprap-lined channel and then into the Pacific Ocean.

5. The State Water Resources Control Board (State Water Board) adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971, and amended this plan on September 18, 1975. The Thermal Plan contains the following temperature objectives for coastal waters:
 - a. Existing discharges

Elevated temperature wastes shall comply with limitations necessary to assure protection of the beneficial uses and areas of special biological significance.
 - b. New discharges
 - i. Elevated temperature wastes shall be discharged to the open ocean away from the shoreline to achieve dispersion through the vertical water column.
 - ii. Elevated temperature wastes shall be discharged a sufficient distance from areas of special biological significance to assure the maintenance of natural temperature in these areas.
 - iii. The maximum temperature of thermal waste discharges shall not exceed the natural temperature of receiving waters by more than 20°F.
 - iv. The discharge of elevated temperature wastes shall not result in increases in the natural water temperature exceeding 4°F at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge system. The surface temperature limitation shall be maintained at least 50 percent of the duration of any complete tidal cycle.
 - v. Additional limitations shall be imposed when necessary to assure protection of beneficial uses.
6. Pursuant to the Thermal Plan, elevated temperature wastes from Units 1-4 are classified as existing discharges. The waste from Unit 5, which was constructed after May 18, 1972, is classified as a new discharge.
7. Regional Water Boards may, in accordance with Section 316(a) of the Federal Water Pollution Control Act of 1972, and subsequent federal regulations including 40 CFR part 122, grant an exception to Water Quality Objectives in the Thermal Plan. Prior to becoming effective, such exceptions and alternative less stringent requirements must receive the concurrence of the State Water Board.
8. An exception for new source performance standards contained in the Thermal Plan and power plant regulations for discharges from Unit 5 has not been granted to date.
9. Order No. R9-2015-0002 implements all applicable Thermal Plan and U.S. Environmental Protection Agency (USEPA) thermal requirements and prescribes the following temperature effluent limitation for Unit 5:

The maximum temperature of the discharge through Discharge Point No. 001 to the

- Pacific Ocean shall not exceed, at any time, the natural temperature of the receiving water by more than 20°F.
10. Order No. R9-2016-0002 prescribes the following receiving water limitations for thermal characteristics based on the Thermal Plan:
 - a. Elevated temperature wastes from all Units shall comply with limitations necessary to assure protection of the beneficial uses and Areas of Special Biological Significance.
 - b. Elevated temperature wastes from Unit 5 shall be discharged to the open ocean away from the shoreline to achieve dispersion through the vertical water column.
 - c. Elevated temperature wastes from all Units shall be discharged a sufficient distance from areas of special biological significance to assure the maintenance of natural temperature in these areas.
 - d. The discharge of elevated temperature wastes from Unit 5 shall not result in increases in the natural water temperature exceeding 4°F at (a) the shoreline, (b) the surface of any ocean substrate, or (c) the ocean surface beyond 1,000 feet from the discharge system. The surface temperature increase limitation shall be maintained for at least 50 percent of the duration of any complete tidal cycle.
 11. Order No. R9-2016-0002 prescribes temperature limitations for Unit 5 that are new and/or more stringent than the effluent limitations in Order No. R9-2006-0043, the Previous Order.
 12. The Discharger cannot immediately comply with the new effluent limitation described in Finding 9 because of the way that the Facility is currently designed to prevent biofouling of the once-through cooling (OTC) system. As described in Finding 3, heat treatments are performed every five to eight weeks to reduce the accumulation of encrusting organisms within the OTC system. These heat treatments involve raising temperatures throughout the OTC system to at least 105°F for two hours, with a maximum temperature of 120°F. As currently designed, discharges from Unit 5 are commingled with discharges from Units 1-4, making it impracticable to separate the discharges from Unit 5.
 13. The Discharger cannot immediately comply with the new receiving water limitations described in Finding 10.b and 10.d. The discharges from Units 1-5 are commingled and discharged to the Pacific Ocean through a riprap-lined channel across the beach. The Discharger would either need to redesign the outfall for Unit 5 or cease discharging to comply with the new receiving water limitations.
 14. The State Water Board adopted the *California State Water Resources Control Board Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling* (OTC Policy) on May 4, 2010. The OTC Policy establishes technology-based standards to implement federal Clean Water Act section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life.

15. The Discharger reported that the Facility will comply with the OTC requirements and the Thermal Plan requirements by ceasing all OTC discharges by December 31, 2017.
16. Section VI.C.6 of Order No. R9-2016-0002 contains the following compliance schedule to achieve compliance with the OTC Policy:

Table 1. Schedule of Compliance with OTC Policy

Task	Compliance Date
1. Submit progress report on compliance actions (construction of the CECP and retirement of the Units).	July 1, 2016
2. Submit progress report on compliance actions (construction of the CECP and retirement of the Units).	July 1, 2017
3. Cease operation of the Units.	December 31, 2017 ¹

¹ The final compliance date of December 31, 2017 may only be suspended in accordance with section 2.B(2) of the OTC Policy.

LEGAL BASIS

17. California Water Code (Water Code) section 13300 states:

“Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.”
18. Water Code section 13385, subdivisions (h) and (i), require the San Diego Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations.
19. Section 13385(j)(3) exempts violations of an effluent limitation from mandatory minimum penalties "where the waste discharge is in compliance with ... a time schedule order issued pursuant to section 13300, *if all of the [specified] requirements are met.*" (emphasis added).
20. In accordance with Water Code section 13385(j)(3)(B), mandatory minimum penalties do not apply to a violation of an effluent limitation where:
 - a. The waste discharge is in compliance with a Time Schedule Order (TSO) issued pursuant to section 13300 or 13308;
 - b. The discharger is not able to consistently comply with the effluent limitation because it is a new, more stringent limitation that became applicable after adoption of the prior permit; new or modified control measures are necessary in order to comply with the effluent limitation; and

- c. The new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
21. The temperature limitations in Order No. R9-2016-0002 for Unit 5 are new and/or more stringent than the Previous Order. The Discharger is unable to comply with the new effluent limitations. It is necessary for the Discharger to implement new or modified control measures to comply with the new and/or more stringent effluent limitations in Order No. R9-2016-0002, these control measures cannot be designed, installed, and put into operation within 30 calendar days.
 22. Pursuant to Water Code section 13385(j)(3)(C), a TSO for bringing the waste discharge into compliance with the effluent limitation must be as short as possible, and shall not exceed 5 years in length.
 23. Pursuant to Water Code section 13385(j)(3)(C)(iii), If the time schedule exceeds one year from the effective date of the order, the schedule shall include interim requirements and the dates for their achievement.
 24. This TSO includes interim requirements and the dates for their achievement. The interim requirements include an interim 24-hour, instantaneous maximum, and heat treatment effluent limitations for temperature and interim thermal characteristic receiving water limitations as well as actions and milestones leading to compliance with the final effluent limitations for these pollutants. Consistent with the requirements of Water Code sections 13385(j)(3)(C) and 13385(j)(3)(c)(ii)(II), this TSO has established a final compliance date that is as short as possible based on the Discharger's OTC Policy compliance schedule.
 25. Pursuant to Water Code section 13385(j)(3), full compliance with the requirements of this TSO exempts the Discharger from mandatory minimum penalties for violations of the Temperature Effluent Limitations for Unit 5 in Order No. R9-2016-0002 that occur after the effective date of this TSO until its expiration on December 31, 2017.
 26. Pursuant to Water Code section 13385(j)(3)(C)(ii)(II), following a public hearing, and upon a showing that the Discharger is making diligent progress toward bringing the waste discharge into compliance with the effluent limitation, the San Diego Water Board may extend the time schedule for an additional period not to exceed five years in length, if the discharger demonstrates that the additional time is necessary to comply with the effluent limitation.
 27. Pursuant to Water Code sections 13263.3(a), (d)(1)(D), and (d)(3), the Legislature finds and declares that pollution prevention should be the first step in a hierarchy for reducing pollution and managing wastes, and to achieve environmental stewardship for society. The Legislature also finds and declares that pollution prevention is necessary to support the federal goal of zero discharge of pollutants into navigable waters. The San Diego Water Board may require a discharger subject to its jurisdiction to complete and implement a pollution prevention plan if the discharger is subject to a time schedule order issued pursuant to Water Code section 13300 or 13308.
 28. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, section 21000 et seq.; CEQA) pursuant to Water Code section 13389, since the adoption or modification of an NPDES permit for an

existing source is statutorily exempt and this Order only serves to implement an NPDES permit (Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside (1977) 73 Cal.App.3d 546, 555-556.).

29. The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to issue this TSO concerning compliance with waste discharge requirements (WDRs) and provided them with an opportunity to submit their written comments and recommendations pursuant to Water Code section 13167.5.
30. The San Diego Water Board, in a public meeting , heard and considered all comments on this matter

IT IS HEREBY ORDERED that, pursuant to the Water Code sections 13300 and 13385(j)(3), the Discharger, as operator of the Facility, shall comply with the time schedules set forth below to ensure compliance with the effluent limitations of Order No. R9-2016-0002, NPDES No. CA0001350. Except as modified or superseded by the TSO requirements and provisions set forth below, all of the findings, prohibitions, provisions, and other requirements of Order No. R9-2016-0002, NPDES No. CA0001350 remain in full force and effect.

A. INTERIM EFFLUENT LIMITATIONS

The Discharger shall comply with the following interim effluent limitations for discharges from Unit 5 on the effective date of this TSO. Except as modified or superseded by the interim effluent limitations set forth below, all of the effluent limitations in Order No. R9-2016-0002 remain in full force and effect:

1. Except during heat treatment operations, the temperature of the discharge through Discharge Point No. 001 to the Pacific Ocean shall not average more than 20°F (11.1°C) above that of the incoming lagoon water during any 24-hour period.
2. Except during heat treatment operations, the discharge through Discharge Point No. 001 to the Pacific Ocean shall not at any time exceed 25°F (13.9°C) above that of the incoming lagoon water.
3. During heat treatment operations, the temperature of the discharge through Discharge Point No. 001 to the Pacific Ocean shall not exceed 120°F (48.9°C). A maximum temperature of 120°F (48.9°C) in the discharge shall not be maintained for a duration exceeding 2 hours.

B. COMPLIANCE SCHEDULE

The Discharger shall complete all compliance tasks no later than the specified dates set forth in Table 2 below.

Table 2. Time Schedule

Task No.	Compliance Date	Compliance Task
1	July 1, 2016	Submit progress report on compliance actions (construction of the Carlsbad Energy Center Project (CECP) and retirement of the Units).
2	July 1, 2017	Submit progress report on compliance actions (construction of the CECP and retirement of the Units).
3	December 31, 2017 ¹	Cease operation of the Units.

¹ The final compliance date of December 31, 2017 may only be extended in accordance with section 2.B(2) of the OTC Policy.

C. POLLUTION PREVENTION PLAN

The Discharger shall prepare and submit a pollution prevention plan work plan that meets the requirements of section 13263.3(d)(2) for approval of the Executive Officer by October 1, 2016, pursuant to Water Code section 13385(j)(2)(B)(ii).

D. COMPLIANCE SCHEDULE REPORTING REQUIREMENTS

1. The Discharger shall prepare and submit the following to the San Diego Water Board within 30 days after each compliance date specified in Table 2 of this TSO:
 - a. A written submission detailing compliance or noncompliance with the specific schedule date and task; and
 - b. If noncompliance is reported, the written submission shall contain a description of the noncompliance and its cause, steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance; and the anticipated time the noncompliance is expected to continue. The Discharger shall also notify the San Diego Water Board within 30 days by letter when it returns to compliance with the time schedule.
2. The Discharger shall give at least 60 days written notice to the San Diego Water Board if the Facility will seek approval to continue discharging OTC water beyond December 31, 2017 pursuant to section 2.B(2) of the OTC Policy.

E. PROVISIONS

1. All technical and monitoring reports required by this TSO are in accordance with Water Code sections 13267 and 13383. The San Diego Water Board needs this information to determine compliance with the TSO and Order No. R9-2016-0002. The Discharger is already subject to similar reporting requirements pursuant to Order No. R9-2016-0002. Therefore, the burdens, including costs, of these reports bear a

- reasonable relationship to the need for the reports and the benefits to be obtained from the reports.
2. Any person signing a document submitted under this TSO shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”
 3. If the Discharger fails to comply with any provision of this TSO, the San Diego Water Board may take any further action authorized by law. The Executive Officer, or his/her delegee, is authorized to take appropriate enforcement action pursuant, but not limited to, Water Code sections 13350 and 13385. The San Diego Water Board may also refer any violations to the Attorney General for judicial enforcement, including injunction and civil monetary remedies.
 4. The San Diego Water Board may reopen this TSO at its discretion or at the request of the Discharger, if warranted. Lack of progress towards compliance with this TSO may be cause for the San Diego Water Board to modify the conditions of this TSO.
 5. This TSO becomes effective on May 1, 2016 and expires on December 31, 2017.

I, David W. Gibson, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order adopted by the California Regional Water Quality Control Board, San Diego Region, on March 9, 2016.

TENTATIVE

David W. Gibson
Executive Officer