

State of California
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

TIME SCHEDULE ORDER R4-2023-YYYY
REQUIRING AES ALAMITOS, LLC
(ALAMITOS GENERATING STATION)
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN
ORDER R4-2020-0134
(NPDES PERMIT NO. CA0001139)

The California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), finds:

1. AES Alamitos, LLC (Discharger or Permittee) is the owner and operator of the Alamitos Generating Station (Facility), a steam electric generating facility, located at 690 N. Studebaker Road, Long Beach, California.
2. Currently, there are three active fossil-fueled, steam-powered electric generating units on-site. The generating units operate using once-through-cooling (OTC) water drawn from the Los Cerritos Channel Estuary using circulation pumps. The Facility discharges OTC water and low-volume wastewater to the San Gabriel River Estuary through two discharge outfalls (Discharge Points 002 and 003) located along the eastern boundary of the property and the west bank of the river. OTC water accounts for greater than 99 percent of the total discharge from the Facility. Process wastewater is combined with OTC water prior to discharge. The Facility discharges industrial stormwater runoff to the Los Cerritos Channel Estuary through several outfalls. Stormwater monitoring is conducted at two discharge points: O-48 and O-84. Discharge Point O-48 is representative of the stormwater runoff from the area around Units 1-4 and Discharge Point O-84 is representative of the stormwater runoff from the area around Units 5 and 6 (Units 1, 2, and 6 are inactive as of December 31, 2019). All discharges from the Facility including OTC water, low-volume wastewater and industrial stormwater runoff are regulated under waste discharge requirements contained in Order No. R4-2020-0134.
3. On May 4, 2010, the State Water Resources Control Board (State Board) adopted the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy). The OTC Policy became effective on October 1, 2010. The OTC Policy establishes technology-based standards to implement Clean Water Act (CWA) section 316(b) and reduce the harmful effects associated with cooling water intake structures on marine and estuarine life. All owners or operators of existing power plants were required to submit an implementation plan identifying the selected OTC compliance alternative, either Track 1 or Track 2, as defined

therein, by April 1, 2011. The Discharger submitted an implementation plan on April 1, 2011, and a revised implementation plan on June 17, 2011 that indicated that the proposed mechanism to bring all its units into compliance would be via Track 1, that would consist of the construction of dry-cooled natural gas-fired combined cycle gas turbine (CCGT) power blocks and the shutdown of all the existing units. The CCGT units would operate without OTC water and therefore the intake and discharge of OTC water would cease. The OTC Policy originally included a final compliance date of December 31, 2020.

4. On September 10, 2015, the Los Angeles Water Board adopted Order No. R4-2015-0173, which renewed the waste discharge requirements and NPDES permit for the Facility. Order No. R4-2015-0173 included new effluent limitations for the discharge of OTC water commingled with process wastewater for total residual chlorine, temperature, copper, bacteria, nickel, and bis(2-ethylhexyl)phthalate; and for the discharge of storm water for total suspended solids (TSS). Order No. R4-2015-0173 also included new receiving water limitations for temperature. The Los Angeles Water Board adopted Time Schedule Order (TSO) No. R4-2015-0174 concurrently with the adoption of Order No. R4-2015-0173, based on a request by the Discharger for additional time to achieve compliance with new effluent limitations and evaluation of available monitoring data. TSO No. R4-2015-0174 included interim effluent limitations for total residual chlorine, temperature, and copper; and interim receiving water limitations for temperature. Both Order No. R4-2015-0173 and TSO No. R4-2015-0174 became effective on January 1, 2016, and expired on December 31, 2020.
5. On November 13, 2016, the Discharger submitted a written request for additional time to achieve compliance with the new effluent limitations for *Enterococcus* and storm water effluent limitations for total suspended solids contained in Order R4-2015-0173. Based on monitoring data, the Los Angeles Water Board found that interim effluent limitations were appropriate for *Enterococcus* and total suspended solids. On March 14, 2017, the Executive Officer issued TSO R4-2015-0174-A01 amending TSO R4-2015-0174 to include interim effluent limitations for *Enterococcus* and an interim storm water limitation for total suspended solids. The final compliance deadline (December 31, 2020) was unchanged.
6. On March 12, 2018, the Discharger submitted a request to modify the compliance deadlines in TSO R4-2015-0174-A01 due to grid reliability issues involving the California Independent System Operator (CAISO), Southern California Edison (SCE) and the California Public Utilities Commission (CPUC). The proposed schedule would extend operations of Units 5 and 6 by one year but shorten the operations of Units 1 and 2 by one year. The Los Angeles Water Board evaluated the proposed modifications to the compliance schedule and determined that modification was appropriate. On June 21, 2018, the Executive Officer issued TSO R4-2015-0174-A02 to revise interim milestones relating to Units 1, 2, 5 and 6. The final compliance deadline of December 31, 2020, was again unchanged.
7. In accordance with OTC Policy, the Discharger made progress to comply with the OTC Policy by the original December 31, 2020, deadline. The Discharger permanently shut down three of the six generating units, Units 1, 2 and 6 at the

Facility. By shutting these units, the maximum volume discharged decreased from 1,271 MGD to 729 MGD. The Facility also constructed two dry-cooled natural gas-fired CCGT power blocks to replace the retired units. These units began commercial operation on February 6, 2020. The construction of the CCGT units resulted in the elimination of stormwater Discharge Point O-76. The Facility also completed construction of a Battery Energy Storage System (BESS) in December 2020.

8. The joint-agency Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) was created to advise the State Water Board on the implementation of the OTC Policy, ensuring the compliance schedule takes into account the reliability of California's electricity supply. SACCWIS is composed of representatives from the California Air Resources Board, the California Coastal Commission, the California Energy Commission, the California Public Utilities Commission (CPUC), the California State Lands Commission, the California Independent System Operator (CAISO), and the State Water Board.
9. On August 23, 2019, the SACCWIS approved the Local and System-Wide 2021 Grid Reliability Studies report, which assessed electric system reliability under study assumptions and scenarios. The analyses showed that it was necessary for Alamos Units 3, 4, and 5 to be operational for two or more years to ensure local grid reliability.
10. On November 17, 2019, CPUC adopted Decision ("D.")19-11-016, which directed 3,300 megawatts of new capacity be procured by 2023 to address system-wide energy shortfalls. (D.)19-11-016 also included a recommendation that the OTC Policy compliance date for Alamos Units 3, 4, and 5 be extended to December 31, 2023.
11. In January 2020, the SACCWIS voted in favor of a recommendation to the State Water Board to extend the final compliance date for the Facility an additional three years to December 31, 2023. On September 1, 2020, the State Water Board considered the SACCWIS recommendation and adopted an amendment to the OTC Policy that extended the final compliance date for the Discharger of December 31, 2023 for Units 3, 4 and 5.
12. In light of the recommended OTC Policy compliance deadline of December 31, 2023, the Discharger submitted a written request on January 22, 2020 for an extension to come into compliance with the effluent limitations contained in Order No. R4-2015-0173 for temperature, total residual chlorine, *Enterococcus*, copper, nickel and bis(2-ethylhexyl)phthalate at Discharge Points 002 and 003; and the effluent limitation for TSS at Discharge Points O-48 and O-84; and, the receiving water limitation for temperature.
13. On November 12, 2020, the Los Angeles Water Board adopted Order No. R4-2020-0134, which renewed the waste discharge requirements and NPDES permit for the Facility and TSO No. R4-2020-0135. Order No. R4-2020-0134 became effective on January 1, 2021, and expires on December 31, 2025, consistent with federal regulations setting the duration of NPDES permits. TSO No. R4-2020-0135 also became effective on January 1, 2021, and expires on December 31, 2023 consistent with the Facility's compliance deadline in the OTC Policy. TSO No. R4-2020-0135

carried over the interim effluent limitations for temperature, total residual chlorine, copper, and *Enterococcus* at Discharge Points 002 and 003; the interim stormwater limitation for TSS at Discharge Points O-48 and O-84; and the interim receiving water limitations for temperature from TSO No. R4-2015-0174 as amended. TSO No. R4-2020-0135 also included new interim effluent limitations for nickel and bis(2-ethylhexyl)phthalate.

14. On June 30, 2022, Governor Gavin Newsom approved Assembly Bill 205 (AB 205), which established the Electricity Supply Strategic Reliability Reserve Program (Strategic Reserve) to address system-wide reliability concerns. The Strategic Reserve is intended as a transitional tool to address the grid reliability risks from extreme events from climate change, including but not limited to heat waves, wildfires, and drought, as well as other factors, such as supply chain disruptions. To allow time for new and clean energy resources to come online, AB 205's Strategic Reserve provisions allow contracting with and extending the life of existing generating facilities planned for retirement, such as OTC power plants. However, under this program, any power plants participating in the Strategic Reserve are only used to support grid operations during extreme weather events (including maintenance and test events as necessary). The program is expected to remain in operation through 2026 but may be extended if circumstances warrant continuation.
15. On September 30, 2022, the SACCWIS recommended extending the OTC Policy compliance dates for several generating stations, including the Facility, an additional three years (until December 31, 2026) to address grid reliability issues and to provide capacity to the Strategic Reserve. On August 15, 2023, the State Water Board considered the SACCWIS recommendation and adopted an amendment to the OTC Policy that established a final compliance date for the Discharger of December 31, 2026. This extension is contingent upon the Facility participating in the Strategic Reserve established by AB 205.
16. On May 5, 2023, the Discharger submitted a request for additional time, up to December 31, 2026, to achieve compliance with the effluent limitations established in Order No. R4-2020-0134 for temperature, *Enterococcus*, and copper at Discharge Points 002 and 003 as well as the receiving water limitation for temperature. The written request referenced the grid reliability issues addressed by the SACCWIS in Finding 15 above. The resulting amendment to the OTC Policy allows continued operation of Units 3, 4 and 5 for three additional years to participate in the Strategic reserve and delays the Discharger's ability to shut down its remaining OTC units (units 3, 4, and 5) until at least December 31, 2026.
17. The Strategic Reserve acknowledges that existing generation assets, such as OTC power plants planned for retirement, will be required to maintain reliability during extreme or simultaneously occurring extreme events as California transitions to a clean energy economy. To minimize potential environmental impacts by OTC operations, the OTC units "*will only be used in extreme events such as heatwaves*

*and only as a last resort.*¹ It is anticipated that most OTC unit operations will occur during the May through October period when system demands are highest, system conditions are more likely to be extreme, and a Resource Adequacy shortfall is identified by CAISO and actioned through the Energy Emergency Alert (EEA) process. OTC unit operations are expected to be substantially lower than historic operations, but difficult to predict with certainty due to the unpredictable nature of the risk events that can lead to an EEA notification. For reference, the Facility's OTC units operated for 10 days during extreme weather in 2020; and only for 1 day in 2021 and 6 days in 2022.

18. 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."

19. Based on an analysis of monitoring data submitted by the Discharger for the period of January 2020 through May 2023, the Los Angeles Water Board finds that, without interim limitations contained in TSO No. R4-2020-0135, the discharge to the San Gabriel River Estuary through Discharge Points 002 and 003 would not have complied with the effluent limitations contained in Order No. R4-2020-0134 for temperature in 35 samples, for copper in 16 samples, and for *Enterococcus* in 8 samples; and would not have complied with the receiving water limitation for temperature in 1 out of 6 samples. Accordingly, pursuant to CWC section 13300, a discharge of waste is taking place and/or threatens to take place that violates requirements prescribed by the Los Angeles Water Board.
20. Water Code section 13385, subdivisions (h) and (i), require the Los Angeles Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. Section 13385(j)(3) exempts violations of an effluent limitation from mandatory minimum penalties where (1) "the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300..." and (2) "the effluent limitation is a new, more stringent, or modified regulatory requirement that has become applicable to the waste discharge after the effective date of the waste discharge requirements and after July 1, 2000, new or modified control measures are necessary in order to comply with the effluent limitation, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days."

¹ Governor's Signing Statement for AB 205, p. 1; emphasis added.

21. Water Code section 13385.1 defines effluent limitation for the purposes of this section as “a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim and may be expressed as a prohibition. An effluent limitation ... does not include a receiving water limitation, a compliance schedule, or a best management practice.”

22. Prerequisites to issuing a TSO include those set forth in Water Code section 13385 subdivisions (j)(3)(C)(i), (j)(3)(C)(iii) and (j)(3)(D):

The TSO must establish “a time schedule for bringing the waste discharge into compliance with the effluent limitation that is as short as possible, taking into account the technological, operational, and economic factors that affect design, development and implementation of the control measures that are necessary to comply with the effluent limitation.” (Wat. Code § 13385, subd. (j)(3)(C)(i).) The TSO shall not exceed five years in length unless an extension is granted in accordance with Water Code section 13385, subdivision (j)(3)(C). 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. The interim requirements shall include both (I) Effluent limitations for the pollutant or pollutants of concern. (II) Actions and milestones leading to compliance with the effluent limitation. (Wat. Code § 13385, subd. (j)(3)(C)(iii).) The discharger must “[have] prepared and [be] implementing in a timely and proper manner, or [be] required by the regional board to prepare and implement, a pollution prevention plan pursuant to section 13263.3.” (Wat. Code § 13385, subd. (j)(3)(D).)

23. In accordance with Water Code sections 13300 and 13385, subdivision (j)(3)(B)(i), the Los Angeles Water Board finds that the Discharger cannot consistently meet the effluent limitations contained in Order No. R4-2020-0134 for temperature, copper, and *Enterococcus* for the discharge of commingled wastewater to the San Gabriel River Estuary through Discharge Points 002 and 003, which were first established in Order No. R4-2015-0173. The Los Angeles Water Board also finds that the Discharger cannot consistently meet the receiving water limitation for *Enterococcus* first established in Orders No. R4-2015-0173. In order to comply with the temperature, *Enterococcus*, and copper effluent limitations in the discharge to the San Gabriel River Estuary and the receiving water limitations for temperature, the Discharger will cease the discharge of OTC water and low-volume wastes. The cessation of discharge will be accomplished through compliance with the OTC Policy.

24. Pursuant to Water Code section 13385, subdivision (j)(3)(C) a regional board may establish a TSO not to exceed five years in length and extend it for an additional period not to exceed five years in length, following a public hearing and upon a showing of diligent progress. Consistent with this provision, the Los Angeles Water Board may issue a TSO for the effluent limitations for a period not to exceed a total of ten years in length from the effective date of the original TSO. The original TSO for the temperature and copper effluent limitations, TSO No. R4-2015-0174, went into effect on January 1, 2016. The original TSO for the *Enterococcus* effluent limitation,

TSO No. R4-2015-0174-A1, went into effect on March 14, 2017. The Discharger has made diligent progress in coming into compliance with effluent limitations in Order No. R4-2020-0134 for temperature, *Enterococcus*, and copper at Discharge Points 002 and 003. To date, the Discharger has retired three OTC units (units 1, 2, and 6), constructed battery storage capacity onsite, and implemented best management practices that allowed them to come into compliance with the final TSS effluent limitation at Discharge Points O-48 and O-84. Implementation of improved chlorination control procedures has allowed the Discharger to come into compliance with the final total residual chlorine effluent limitation at Discharge Points 002 and 003. Due to a natural reduction of the pollutants in the intake, the Discharger is no longer requesting interim limitation for bis(2-ethylhexyl)phthalate and nickel. Further, the limited operations of the OTC units will result in a significant decrease in the mass loading of pollutants to the receiving water. Therefore, the compliance requirements contained in TSO No. R4-2020-0135 for temperature, copper, and *Enterococcus* at Discharge Points 002 and 003 may be extended until December 31, 2025 under this new TSO.

25. The Los Angeles Water Board issues this TSO to the Discharger based on all the findings set forth herein.
26. Pursuant to Water Code section 13385, subdivision (j)(3), full compliance with the requirements of this TSO exempts the Permittee from mandatory minimum penalties only for violations of the final effluent limitations for temperature, copper, and *Enterococcus* in the discharge to the San Gabriel River Estuary contained in Order No. R4-2020-0134 that occur after the effective date of this TSO.
27. Pursuant to Water Code section 13304, “[a] person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement . . . shall, upon order of the regional board . . . abate the effects of the waste.”
28. The Los Angeles Water Board finds that is appropriate to use its authority under Water Code section 13304 to abate the effects of the exceedances related to temperature, copper and *Enterococcus*. Continued operation of aging OTC power plants has a broad range of adverse effects including impacts to water quality and marine life. A requirement to abate the effect of the discharge serves to mitigate the effects of these exceedances in the San Gabriel River Estuary and is consistent with the approach first adopted by the State Water Board in Order WQ 2022-XXXX, In the Matter of the Petition of AES Redondo Beach, LLC.
29. The action to adopt this TSO, which provides additional time to comply with Order No. R4-2020-0134 and continues the effluent limitations contained in the previous TSO, is exempt from the California Environmental Quality Act (CEQA) in accordance with California Code of Regulations, title 14, section 15301 because the Facility is an existing facility, and the TSO involves no expansion of existing use. In addition, the issuance of the TSO is categorically exempt from CEQA pursuant to section 15321, subdivision (a) because it is an enforcement order issued by the Los Angeles Water Board.

30. The Los Angeles Water Board has notified the Permittee and interested agencies and persons of its intent to issue this TSO concerning compliance with waste discharge requirements and has provided them with an opportunity to submit written comments. The Los Angeles Water Board considered all comments pertinent to this matter.
31. Any person aggrieved by this action of the Los Angeles Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the Los Angeles Water Board action, except that if the thirtieth day following the action falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

IT IS HEREBY ORDERED that, pursuant to Water Code section 13300 and 13385, subdivision (j)(3), AES Alamitos, LLC, as owner and operator of the Alamitos Generating Station, shall comply with the requirements listed below to ensure its discharges comply with the final effluent limitations for temperature, *Enterococcus*, and copper in the discharge to the San Gabriel River Estuary; and the final receiving water limitations for temperature contained in Order No. R4-2020-0134:

1. Comply immediately with the following interim effluent limits at Discharge Points 002 and 003, which shall be deemed effective from January 1, 2024, to December 31, 2025:

Parameter	Units	AMEL	MDEL	Instantaneous Maximum	Notes
Temperature	°F	---	---	103	A
Copper	µg/L	8.0	9.3	---	B
<i>Enterococcus</i>	MPN/100 ml	935	2,429	---	C

Notes:

- The interim limitation for temperature applies during the period of May 1 through October 31 and only during operations of the OTC units, Units 3, 4, and 5 during extreme weather events or as otherwise required to participate in the Strategic Reserve program established by AB 205.
 - The interim effluent limitation for copper applies during both dry and wet weather conditions.
 - The AMEL and MDEL for *Enterococcus* are applied as a Geometric Mean Limit and a Single Sample Limit, respectively.
2. Comply immediately with the following interim receiving water limit, which shall be deemed effective from January 1, 2024, to December 31, 2025:

Parameter	Units	Instantaneous Maximum
Temperature	°F	90 (Note a)

Note:

- a. Receiving water temperature limitation applies during the period of May 1 to September 30. Based on temperature as measured at Receiving Water Station RW-11, located just downstream of the Facility.
3. Achieve full compliance with the final effluent limitations for temperature, copper, and *Enterococcus* and receiving water limitations for temperature as soon as possible, but no later than December 31, 2025.
4. Submit semiannual progress reports of efforts taken towards compliance with the final effluent limitations. The reports shall summarize the progress to date, activities conducted during the reporting period and the activities planned for the upcoming period. Each report shall be submitted to this Los Angeles Water Board by August 15th and February 15th for the reporting period of January 1st through June 30th and July 1st through December 31st, respectively, and include any new pertinent updates. The first semiannual progress report is due on August 15, 2024, for January 1, 2024, through June 30, 2024, reporting period.
5. 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.”
6. If the Permittee fails to comply with any provision of this TSO, the Los Angeles 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 to, but not limited to, CWC sections 13350 and 13385. The Los Angeles Water Board may also refer any violations to the Attorney General for judicial enforcement, including injunction and civil monetary remedies.
7. All other provisions of Order No. R4-2020-0134 not in conflict with this TSO remain in effect.
8. The Los Angeles Water Board may reopen this TSO at its discretion or at the request of the Permittee, if warranted. Lack of progress towards compliance with this TSO may be cause for the Los Angeles Water Board to modify the conditions of this TSO.
9. This TSO becomes effective on January 1, 2024, and it expires on December 31, 2025.

IT IS HEREBY FURTHER ORDERED that for the reasons discussed above, and pursuant to Water Code section 13304, that the Discharger shall comply with the requirements listed below to abate the effect of its discharges for temperature,

Enterococcus, and copper in the discharge to the San Gabriel River Estuary; and the final receiving water limitations for temperature contained in Order No. R4-2020-134:

AES Alamos, LLC, as operator of the Alamos Generating Station, shall make annual payments as described below to abate the effects of the predicted exceedances of the temperature, copper and *Enterococcus* effluent limitations set forth in Order No. R4-2020-0134. Based on the historical exceedances and receiving water impacts from the discharges, AES Alamos, LLC shall make annual payments of \$75,000 to an entity such as the City of Long Beach, for studies or projects to increase circulation in Alamos Bay. Additionally, AES Alamos notified the Los Angeles Water Board of its intention to support voluntary environmental programs to further reinforce abatement of the impacts of the discharge downstream of the Facility. These include:

- a. Reintroduction of endangered Salt Marsh Bird's Beak plant in Los Cerritos Wetlands.
- b. Establish and maintain Native Plant Nursery for the Los Cerritos Wetlands.
- c. Expansion of Southern California Sea Turtle Monitoring Community Science Program.

The required payments for 2024 are due no later than June 30, 2024. The required payments for 2025 are due no later than June 30, 2025.

I, Susana Arredondo, 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, Los Angeles Region, on November 16, 2023.

Susana Arredondo, Executive Officer