

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

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

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

1. AES Alamitos, LLC (hereinafter, Discharger or Permittee) is the owner and operator of the Alamitos Generating Station (hereinafter Facility), a steam electric generating facility, located at 690 N. Studebaker Road, Long Beach, California.
2. 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 wastewaters are combined with OTC water prior to discharge.
3. The Facility discharges industrial storm water runoff to the Los Cerritos Channel Estuary through several outfalls. Storm water monitoring is conducted at two sampling points. Discharge Point O-48 is representative of the storm water runoff from the area around Units 1-4 and Discharge Point O-84 is representative of the storm water runoff from the area around Units 5 and 6 (Units 1, 2 and 6 are inactive as of December 31, 2019).
4. On May 4, 2010, the State Water Board adopted a Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy). The OTC Policy was approved by the Office of Administrative Law (OAL) on September 27, 2010. The OTC Policy was amended on June 18, 2013. The OTC Policy establishes technology-based standards to implement federal 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. A revised

implementation plan was later submitted on June 17, 2011. Additional implementation information was submitted on March 31, 2013 and November 8, 2013. Per the submitted information, the Discharger has indicated that the proposed mechanism to bring all its units into compliance will be via Track 1. The Track 1 compliance will be completed in three phases and will consist of the construction of dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks and the shutdown of the existing units. The CCGT units operate without OTC water and therefore the intake and discharge of OTC water will cease. The Discharger will also construct a battery energy storage system for additional power storage capability. The OTC Policy included a final compliance date of December 31, 2020 for the completion of all three phases.

5. On September 10, 2015, the Regional Water Board adopted Order R4-2015-0173, which renewed the waste discharge requirements and NPDES permit for the Alamitos Generating Station. Order R4-2015-0173 expires on December 31, 2020. Order 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.
6. Prior to the adoption of Order R4-2015-0173, on May 15, 2015, the Discharger submitted a written request for additional time to achieve compliance with certain new effluent limitations contained in Order R4-2015-0173. Based on monitoring data, the Regional Water Board found that interim effluent limitations were appropriate for total residual chlorine, temperature, and copper. On September 10, 2015, the Regional Water Board adopted Time Schedule Order (TSO) R4-2015-0174 concurrently with the adoption of Order R4-2015-0173. TSO R4-2015-0174 included interim effluent limitations for total residual chlorine, temperature, and copper. These were all discharges from a mix of OTC water and process wastewater, discharging through Outfalls 001, 002 and 003.
7. After the adoption of Order and TSO R4-2015-0174, on November 13, 2016, the Discharger submitted a written request for additional time to achieve compliance with the new effluent limitations for bacteria and storm water effluent limitations¹ for total suspended solids contained in Order R4-2015-0173. Based on monitoring data, the Regional 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 that amended TSO R4-2015-0174 to include interim effluent limitations for *enterococcus* and an interim storm water limitation for total suspended solids.
8. On March 12, 2018, the Discharger submitted a request to the Regional Water Board to modify the compliance deadlines in TSO R4-2015-0174-A01. The request

¹ Stormwater discharges through Outfalls O-48, O-76 and O-84.

discussed grid reliability issues involving the California Independent System Operator (CAISO), Southern California Edison (SCE) and the California Public Utilities Commission (CPUC). The Regional Water Board evaluated the request for modification of the compliance schedule and determined that the modification to be appropriate. On June 21, 2018, the Executive Officer issued TSO R4-2015-0174-A02 that amended TSO R4-2015-0174-A01 to include the revised compliance schedule. TSO R4-2015-0174-A02 included the interim limitations described above and expired on December 31, 2020.

9. In accordance with OTC Policy compliance, changes have occurred at the Facility since the adoption of Order R4-2015-0173. The Facility previously had six generating units with a total capacity of 2,093 megawatts. On December 31, 2019, the Discharger permanently shut down Units 1, 2 and 6. This decreased the maximum discharge from 1,271 MGD to 729 MGD. Units 1 and 2 discharged OTC water through Discharge Point 001. The Discharger has prevented further discharge to Discharge Point 001 by disabling the power supply to the circulation pumps for Units 1 and 2. The Facility has constructed two dry-cooled natural gas-fired combined cycle gas turbine (CCGT) power blocks to replace the retired units. These units began commercial operation on February 6, 2020. The construction of the CCGT units also resulted in the elimination of storm water Discharge Point O-76.
10. 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. Several compounding events resulted in concern for system-wide grid reliability arising in the summer of 2021. On January 23, 2020, the SACCWIS approved a compliance date extensions report and voted in favor of a recommendation to the State Water Board that included an extension of the compliance date for Alamos Generating Station for three years until December 31, 2023. The SACCWIS recommendation was based on the megawatt need identified in CPUC Decision (D.)19-11-016. On September 1, 2020, 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, 2023. This is a new regulatory requirement with which the Discharger must comply.
12. On January 22, 2020, the Discharger submitted a written request for additional time, up to December 31, 2023, to achieve compliance with the effluent limitations established in Order R4-2020-XXXX 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. The written request referenced the grid reliability issues addressed by SACCWIS in Finding 10 above. The resulting amendment to the OTC Policy requires continued operation of Units 3, 4 and 5 for three additional years and delays the Discharger's ability to achieve compliance with the effluent limitations until December 31, 2023.

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13. On November 12, 2020, the Regional Water Board adopted Order R4-2020-XXXX, which renewed the waste discharge requirements and NPDES permit for the Alamitos Generating Station. Order R4-2020-XXXX prescribes effluent limitations for the discharge of OTC water and low-volume wastes to the San Gabriel River Estuary and for the discharge of storm water to the Los Cerritos Channel Estuary.
14. Pursuant to the procedures outlined in the State Implementation Policy (SIP) Order R4-2020-XXXX prescribes new effluent limitations of 4.5 µg/L Average Monthly Effluent Limitation (AMEL) and 14 µg/L Maximum Daily Effluent Limitation (MDEL) for nickel; and of 18 µg/L MDEL for bis(2-ethylhexyl)phthalate.
15. In accordance with Water Code section 13385, subdivision (j)(3)(C)(ii), the Regional Water Board finds that the Discharger is making diligent progress toward bringing the waste discharge into compliance with the effluent limitations. Specifically, the Discharger has made diligent progress towards compliance with the temperature, total residual chlorine, copper, and *Enterococcus* effluent limitations because it has been steadily implementing Track 1 compliance with the OTC Policy, as described above in Paragraph 9. Additionally, the Regional Water Board finds that the Discharger has demonstrated that additional time is necessary to comply with the effluent limitations, as set forth in the September 1, 2020 amendment to the OTC Policy that established a final compliance date for the Discharger of December 31, 2023.

With respect to the TSS effluent limitation for the storm water discharge, the Discharger has developed and implemented a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP implementation, however, will not provide enough mitigation to comply with the effluent limitation until the construction activity required for OTC Policy compliance is completed. Therefore, the Regional Water Board finds that the Discharger has demonstrated that additional time is necessary to comply with the effluent limitations, as set forth in the September 1, 2020 amendment to the OTC Policy that established a final compliance date for the Discharger of December 31, 2023.

Under these conditions, the Regional Water Board, following a public hearing, may extend the TSO for an additional period not exceeding five years in length for these effluent limitations. Therefore, the compliance requirements contained in TSO R4-2015-0174-A02 for temperature, total residual chlorine, *enterococcus* and copper at Discharge Points 002 and 003; and for total suspended solids at Discharge Points O-48 and O-84 may be extended for up to five years under this new TSO.

16. Based on monitoring data submitted by the Discharger for the period of January 2016 through May 2020, the Regional Water Board finds that the discharge to the San Gabriel River Estuary through Discharge Points 002 and 003 did not comply with the new effluent limitations contained in Order R4-2020-XXXX for nickel in 7 out of 48 samples and for bis(2-ethylhexyl)phthalate in 3 out of 43 samples. Accordingly, pursuant to CWC section 13300, a discharge of waste is taking place and/or

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threatens to take place that violates requirements prescribed by the Regional Water Board.

17. 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. The Regional Water Board evaluated the request for interim limitations and determined that the discharge from the Facility cannot consistently meet new effluent limitations contained in Order R4-2020-XXXX for nickel and bis(2-ethylhexyl)phthalate for the discharge of commingled waste water to the San Gabriel River Estuary through Discharge Points 002 and 003. The Regional Water Board finds that interim limitations for these constituents are appropriate.
19. Water Code section 13385, subdivisions (h) and (i), require the Regional 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 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, *if all of the [specified] requirements are met.*" (emphasis added).
20. In order to comply with the temperature, total residual chlorine, *enterococcus*, copper, nickel and bis(2-ethylhexyl)phthalate limitations in the discharge to the San Gabriel River Estuary, 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. The Regional Water Board issues this Time Schedule Order (TSO) in recognition that the Discharger needs time to complete necessary studies and implement appropriate control measures, including the complete cessation of discharge and implementation of Track 1 compliance. Through this TSO, the Discharger will be required to comply with the final temperature, total residual chlorine, *enterococcus*, copper, nickel and bis(2-ethylhexyl)phthalate limitations in the discharge to the San Gabriel River Estuary no later than December 31, 2023.
21. In order to comply with the TSS limitation in the discharge of industrial storm water to the Los Cerritos Channel Estuary, the Discharger will continue to implement the updated Storm Water Pollution Prevention Plan (SWPPP), submitted to the Regional Water Board in March 2016. Once construction required for OTC Policy compliance is completed, SWPPP implementation is expected to provide sufficient mitigation to comply with the TSS limitation. Upon compliance with the OTC Policy, the only discharge from the Facility will be storm water runoff. The Regional Water Board

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issues this TSO in recognition that the Discharger needs time to implement appropriate control measures. Through this TSO, the Discharger will be required to comply with the final TSS limitation in the discharge of industrial storm water to the Los Cerritos Channel Estuary no later than December 31, 2023.

22. A TSO is appropriate in these circumstances to allow time for the Permittee to implement necessary control measures that will bring the Facility into compliance with the final temperature, total residual chlorine, *enterococcus*, copper, nickel and bis(2-ethylhexyl)phthalate limitations for the discharge to the San Gabriel River Estuary; and the final industrial storm water limitations for TSS for the discharge to the Los Cerritos Channel Estuary.
23. Therefore, this TSO retains the interim effluent limitations contained in TSO R4-2015-0174-A02 for temperature, total residual chlorine, copper and *enterococcus* for the discharge to the San Gabriel River Estuary; and for TSS to the Los Cerritos Channel Estuary.
24. This TSO also establishes interim limitations for bis(2-ethylhexyl)phthalate (MDEL) and nickel (AMEL and MDEL). The interim limitations for nickel and bis(2-ethylhexyl)phthalate have been calculated based on a statistical analysis of data submitted by the Discharger, with the AMEL established at the 95th percentile and the MDEL established at the 99th percentile.
25. The exceedances allowed by this TSO are in the public interest given the facility is a generating station utilized to supply power to the power grid and the significant environmental benefits associated with achieving compliance with the final effluent limitations for the discharge to the San Gabriel River Estuary and the final industrial storm water limitations for the discharge to the Los Cerritos Channel Estuary.
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 temperature, total residual chlorine, copper, *enterococcus*, nickel and bis(2-ethylhexyl)phthalate limitations in the discharge to the San Gabriel River Estuary; and for violations of the final TSS limitations in the industrial storm water discharge to the Los Cerritos Channel Estuary contained in Order R4-2020-XXXX that occur after the effective date of this TSO.
27. This TSO concerns an existing facility and does not significantly alter the status with respect to the facility. This TSO is also being taken for the protection of the environment. Therefore, issuance of this TSO is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21100, et seq.) in accordance with California Code of Regulations, title 14, sections 15301 and 15321, subdivision (a)(2).
28. The Regional 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.

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29. Any person aggrieved by this action of the Regional 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 Regional 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, AES Alamos, LLC, as owner and operator of the Alamos Generating Station, shall comply with the requirements listed below to ensure its discharges comply with the final temperature, total residual chlorine, *enterococcus*, copper, nickel and bis(2-ethylhexyl)phthalate limitations in the discharge to the San Gabriel River Estuary; and the final TSS limitation in the discharge of industrial storm water to the Los Cerritos Channel Estuary contained in Order R4-2020-XXXX:

1. Comply immediately with the following interim effluent limits at Discharge Points 002 and 003, which shall be deemed effective from January 1, 2021 to December 31, 2023:

Parameter	Units	AMEL	MDEL	Instantaneous Maximum
Temperature	°F	---	---	105
Total residual chlorine	mg/L	---	0.2	---
Copper ¹	µg/L	8.0	9.3	---
Nickel	µg/L	33	49	---
Bis(2-ethylhexyl)phthalate	µg/L	---	28	---
<i>Enterococcus</i>	2			
<ol style="list-style-type: none"> 1. The interim effluent limitation for copper applies during both dry and wet weather conditions. 2. Effluent limitations for <i>Enterococcus</i> are described below: <ol style="list-style-type: none"> a. Geometric Mean Limit <i>Enterococcus</i> density shall not exceed 935/100 ml. b. Single Sample Limit <i>Enterococcus</i> density shall not exceed 2,429/100 ml. 				

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Comply immediately with the following interim industrial storm water limit at Discharge Points O-48 and O-84, which shall be deemed effective from January 1, 2021 to December 31, 2023:

Parameter	Units	MDEL
Total Suspended Solids (TSS)	mg/L	385

2. Achieve full compliance with the final temperature, total residual chlorine, *enterococcus*, copper, nickel and bis(2-ethylhexyl)phthalate limitations in the discharge of commingled wastewater to the San Gabriel River Estuary and with the final TSS limitation in the discharge of industrial storm water to the Los Cerritos Channel Estuary as soon as possible, but no later than December 31, 2023.
3. Comply with the schedule as stipulated below:

No.	Task	Deadline
1.	Continue to implement the March 2016 Storm Water Pollution Prevention Plan (SWPPP) and evaluate any additional improvements to reduce the TSS.	ongoing
2.	Eliminate the discharge of OTC water and low volume wastes through Discharge Points 002 and 003 by permanently shutting down Units 3, 4 and 5.	December 31, 2023

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 Regional 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 milestones completed and any new pertinent updates. The first semiannual progress report is due on August 15, 2021 for the January 1, 2021 through June 30, 2021, 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.”

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6. If the Permittee fails to comply with any provision of this TSO, the Regional 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, CWC sections 13350 and 13385. The Regional 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 R4-2020-XXXX not in conflict with this TSO are in effect on January 1, 2021.
8. The Regional 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 Regional Water Board to modify the conditions of this TSO.
9. This TSO becomes effective on January 1, 2021 and it expires on December 31, 2023.

I, Renee Purdy, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an order administratively issued by the California Regional Water Quality Control Board, Los Angeles Region, on November 12, 2020.

Renee Purdy, Executive Officer

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