

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

TIME SCHEDULE ORDER NO. R4-2015-YYYY

**REQUIRING AES ALAMITOS, LLC
(ALAMITOS GENERATING STATION)
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN
ORDER NUMBER R4-2015-XXXX
(NPDES PERMIT NO. CA0001139)**

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 six active fossil-fueled, steam-powered electric generating units on site. The generating units operate using once-through-cooling (OTC) water drawn from the Alamitos Bay using circulation pumps. The Facility discharges OTC water, metal cleaning wastes, treated sanitary wastewater and low volume wastewater to the San Gabriel River Estuary through three discharge outfalls (Discharge Points 001, 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 and sanitary wastewater are combined with OTC water prior to discharge.
3. 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 administrative record for the OTC Policy was approved by the Office of Administrative Law (OAL) on September 27, 2010. The OTC Policy was adopted on October 1, 2010, and 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 OTC compliance alternative selected 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 of its units (1, 2, 3, 4, 5 and 6) into OTC compliance will be via Track 1. The Track 1 compliance will be completed in three phases and will consist in the construction of dry-cooled natural gas fired combined cycle gas turbine (CCGT) power blocks. The OTC Policy includes a final compliance date of December 31, 2020 for the completion of all three phases.
4. On September 10, 2015, the Regional Water Board adopted Order No. R4-2015-XXXX, which renewed the waste discharge requirements and NPDES permit for the Alamitos Generating Station. Order No. R4-2015-XXXX serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA0001139) Program and regulates

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the discharge of the effluents at the Facility. The permit authorizes the discharge of up to 208.2 million gallons per day (MGD) of combined wastewater consisting of once-through cooling water and in-plant wastewaters into the San Gabriel River Estuary, a water of the United States, through Discharge Point 001, 389 MGD through Discharge Point 002 and 674.1 MGD through Discharge Point 003. Order No. R4-2015-XXXX becomes effective on November 1, 2015.

5. The prior order (Order No. 00-082) considered the receiving waters adjacent to the plant site as ocean waters and therefore established permit limitations and conditions to protect beneficial uses and water quality objectives for ocean waters as described by the California Ocean Plan (1997). The Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan), however, classifies the receiving waters as part of the San Gabriel River Estuary (Figure 2-9). The State Water Board, in a memo dated July 18, 2001, identifies the receiving waters for the Alamitos Generating Station as subject to requirements of the State Implementation Policy (SIP), which is applicable only to the inland surface waters, enclosed bays and estuaries of the state. In a letter dated January 21, 2003, the Regional Water Board notified the Discharger of reclassification of the Facility from an ocean discharger to an estuarine discharger. Order No. R4-2015-XXXX reflects the reclassification of the Facility and therefore implements the SIP.
6. The Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) contains temperature objectives for surface waters. The Facility, as presently operating, is considered an existing discharge to the estuaries of California per the Thermal Plan. Water Quality Objective (WQO) 5A of the Thermal Plan states that for existing discharges to the estuaries of California the maximum effluent temperature shall not exceed 86°F.
7. Pursuant to the WQOs for existing discharges to estuaries in the Thermal Plan, Order No. R4-2015-XXXX prescribes a new instantaneous maximum effluent limitation for temperature of 86°F for discharges to the San Gabriel River Estuary. The prior order included an instantaneous maximum effluent limitation for temperature of 105°F. This limitation was allowed under the Thermal Plan for existing discharges to coastal waters.
8. The Basin Plan contains a WQO for total residual chlorine for inland surface water discharges of 0.1 mg/L. Discharges from the Facility to the San Gabriel River Estuary through Discharge Points 001, 002 and 003 are classified as estuarine discharges and therefore the Basin Plan WQO for total residual chlorine applies.
9. Pursuant to the Basin Plan WQO for total residual chlorine, Order No. R4-2015-XXXX prescribes a new maximum daily effluent limitation (MDEL) of 0.1 mg/L for discharges to the San Gabriel River Estuary through Discharge Points 001, 002 and 003. The prior order included an MDEL of 0.45 mg/L for total residual chlorine. This limitation was based on a USEPA-approved variance from technology-based standards for an ocean discharge. The variance is no longer applicable to the discharge because this variance was developed based on a marine receiving water classification and the discharge has since been reclassified to an estuarine receiving water classification.
10. The Basin Plan contains a WQO for pH for inland surface water discharges of between 6.5 and 8.5 standard units (s.u.). Discharges from the Facility to the San Gabriel River Estuary

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through Discharge Points 001, 002 and 003 are classified as estuarine discharges and therefore the Basin Plan WQO for pH applies.

11. Pursuant to the Basin Plan WQO for pH, Order No. R4-2015-XXXX prescribes a new MDEL of between 6.5 and 8.5 s.u. for discharges to the San Gabriel River Estuary through Discharge Points 001, 002 and 003. The prior order included an effluent limitation of between 6.0 and 9.0 s.u. for pH. This limitation was based on a technology-based effluent limitation guideline (ELG) for in-plant waste streams found at 40 C.F.R section 423.12(b)(1).
12. The USEPA approved the State's 2010 CWA section 303(d) list of impaired water bodies on November 12, 2010. The 2010 State Water Board's California CWA section 303(d) List classifies San Gabriel Estuary as impaired and identifies copper as a pollutant of concern. The Regional Water Board adopted Resolution No. 2006-014 on July 13, 2006, that amended the Basin Plan to incorporate the *Total Maximum Daily Loads for Metals and Selenium, San Gabriel River and Impaired Tributaries* (San Gabriel River Metals and Selenium TMDL). The San Gabriel River Metals and Selenium TMDL was approved by the USEPA on March 26, 2007. The TMDL requirements applicable to the discharge from this facility to the San Gabriel River Estuary include dry weather waste load allocations (WLAs) for copper.
13. Pursuant to the San Gabriel River Metals and Selenium TMDL, Order No. R4-2015-XXXX prescribes new effluent limitations for copper of 2.7 µg/L average monthly effluent limitation (AMEL) and 4.6 µg/L MDEL during dry weather. These limitations were calculated according to SIP procedures and TMDL WLAs. Dry weather is assumed for any discharge that occurs when the flow is less than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works. The prior order included effluent limitations of 8 µg/L AMEL and 57 µg/L MDEL that were based on Ocean Plan WQOs.
14. In accordance with section 1.3 of the SIP, the Regional Water Board conducted a Reasonable Potential Analysis (RPA) for each priority pollutant with an applicable criterion or objective to determine if a water quality-based effluent limitation (WQBEL) is required in the permit. The Regional Water Board analyzed effluent and receiving water data and identified the maximum observed effluent concentration (MEC) and maximum background concentration (B) in the receiving water for each constituent. The result of the RPA was that reasonable potential exists for the discharge from Discharge Points 001, 002 and 003 to exceed applicable water quality criteria for copper, nickel and bis(2-ethylhexyl)phthalate (based on California Toxics Rule (CTR) criteria).
15. Pursuant to the procedures outlined in the SIP, Order No. R4-2015-XXXX prescribes new effluent limitations of 5.9 µg/L AMEL and 19 µg/L MDEL for bis(2-ethylhexyl)phthalate. The prior order did not contain effluent limitations for bis(2-ethylhexyl)phthalate because no WQOs for that parameter are included in the Ocean Plan. Pursuant to the procedures outlined in the SIP, Order No. R4-2015-XXXX also prescribes new effluent limitations of, and 5.3 µg/L AMEL and 15 µg/L MDEL for nickel. The prior order included effluent limitations of 28 µg/L AMEL and 112 µg/L MDEL for nickel that were based on Ocean Plan WQOs. Pursuant to the procedures outlined in the SIP, Order No. R4-2015-XXXX also prescribes new effluent limitations of, and 3.2 µg/L AMEL and 5.5 µg/L MDEL for copper. As previously discussed, Order R4-2015-XXXX establishes TMDL-based dry weather effluent limitations for copper. Therefore, the CTR-based limitations for copper apply during wet

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weather only. Wet weather is assumed for any discharge that occurs when the flow is equal to or greater than 156 cubic feet per second (101 MGD) as measured at flow gauge F354-R in Coyote Creek operated by the Los Angeles County Department of Public Works. The prior order included effluent limitations of 8 µg/L AMEL and 57 µg/L MDEL for copper that were based on Ocean Plan WQOs.

16. Pursuant to the Basin Plan WQOs for ammonia as nitrogen, Order No. R4-2015-XXXX prescribes new effluent limitations of 0.57 mg/L AMEL and 1.33 mg/L MDEL. The prior order did not contain effluent limitations for ammonia because the discharge was not classified as subject to the requirements of the Basin Plan.
17. The effluent limitation changes in Order No. R4-2015-XXXX described above for the discharge from the Facility to the San Gabriel River Estuary through Discharge Points 001, 002 and 003 are summarized in the following table:

Parameter	Units	Order No. 00-082 Limitations			Order No. R4-2015-XXXX Limitations		
		AMEL	MDEL	Max	AMEL	MDEL	Max
Temperature	°F	--	--	105 ¹	--	--	86 ²
Total Residual Chlorine	mg/L	--	0.45 ³	--	--	0.1 ⁴	--
Copper, Total Recoverable, Dry Weather ⁵	µg/L	8 ⁶	57 ⁶	--	2.7 ⁷	4.6 ⁷	--
Copper, Total Recoverable, Wet Weather ⁵	µg/L	8 ⁶	57 ⁶	--	3.2 ⁸	5.5 ⁸	--
Nickel, Total Recoverable	µg/L	28 ⁶	112 ⁶	--	5.3 ⁸	15 ⁸	--
Bis(2-ethylhexyl)phthalate	µg/L	--	--	--	5.9 ⁸	19 ⁸	--
Ammonia as N	mg/L	--	--	--	0.57 ⁹	1.33 ⁹	--
pH	s.u.	--	--	6.0-9.0 ¹⁰	--	--	6.5-8.5 ⁴

1. Limitation from the Thermal Plan WQO for existing ocean discharge.
2. Limitation from the Thermal Plan WQO for existing estuarine discharge.
3. Limitation based on EPA-approved variance from standards for ocean discharge.
4. Limitation based on Basin Plan WQO.
5. Dry weather is assumed when the flow is less than 101 MGD as measured at flow gage F354-R in Coyote Creek, wet weather is assumed when the flow is equal to or greater than 101 MGD as measured at flow gage F354-R in Coyote Creek.
6. Limitation based on Ocean Plan WQOs.
7. Limitation based on RPA using SIP procedures and San Gabriel River Metals and Selenium TMDL WLAs.
8. Limitation based on RPA using SIP procedures and CTR criteria.
9. Limitation based on Basin Plan WQOs.
10. Limitation based on ELG at 40 C.F.R section 423.12(b)(1).

18. On May 15, 2015, the Discharger submitted a written request for additional time – up to December 31, 2020, to achieve compliance with the new effluent limitations contained in Order No. R4-2015-XXXX. On June 11, 2015, the Discharger submitted further clarification to the May 15, 2015 request. The Discharger requested interim limitations for total residual chlorine, temperature, copper, nickel, pH, ammonia and bis(2-ethylhexyl)phthalate.
19. Based on field measurements submitted by the Discharger for the period of January, 2009 through January, 2015, the Regional Water Board finds that the discharge to the San

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Gabriel Estuary through Discharge Points 001, 002 and 003 complied with the new effluent limitations contained in Order No. R4-2015-XXXX for nickel in 49 out of 50 samples, for pH in 905 out of 906 samples, for ammonia in 30 out of 30 samples, and for bis(2-ethylhexyl)phthalate 24 out of 25 samples. Accordingly, the Regional Water Board finds that interim limitations are not necessary for these constituents.

20. Based on field measurements submitted by the Discharger for the period of January, 2009 through January, 2015, the Regional Water Board finds that the discharge to the San Gabriel Estuary through Discharge Points 001, 002 and 003 did not comply with the new effluent limitations contained in Order No. R4-2015-XXXX for temperature in 670 out of 3,621 samples, total residual chlorine in 177 out of 360 samples, and copper in 17 out of 53 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 Regional Water Board.
21. California Water Code (CWC) 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."
22. 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 No. R4-2015-XXXX for total residual chlorine, temperature and copper. The Regional Water Board finds that interim limitations for these constituents are appropriate.
23. California 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).
24. In order to comply with the temperature, total residual chlorine and copper limitations in the discharge to the San Gabriel River Estuary, the Discharger will cease the discharge of OTC water, low volume wastes, metal cleaning wastes and sanitary wastes. The cessation of discharge will be accomplished through compliance with the OTC Policy, construction of a new sewer line, and containment and transport offsite of metal cleaning wastes. 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. Through this TSO, the Discharger will be required to comply with the final temperature, total residual chlorine and copper limitations in the discharge to the San Gabriel River Estuary no later than October 31, 2020.
25. In accordance with California Water Code section 13385(j)(3)(B)(i), the Regional Water Board finds that: (a) the final temperature, total residual chlorine and copper effluent limitations for the discharge to the San Gabriel River Estuary are new limitations in Order

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No. R4-2015-XXXX, (b) the Discharger needs to implement new or modified control measures in order to comply with the new temperature, total residual chlorine and copper effluent limitations, and (c) the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

26. 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 and copper limitations.
27. Therefore, this TSO establishes interim effluent limitations for temperature, total residual chlorine and copper. The interim limitations for temperature have been determined based on the current performance of the Facility during winter (October to April) and summer (May to September) seasons. The interim limitations for total residual chlorine and copper 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. 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 promptly achieving compliance with the final effluent limitations for the discharge to the San Gabriel River Estuary.
28. Pursuant to CWC section 13385(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 and copper limitations in the discharge to the San Gabriel River Estuary contained in Order No. R4-2015-XXXX that occur after the effective date of this TSO.
29. 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 sections 15301 and 15321(a)(2) of Title 14 of the California Code of Regulations (CCR).
30. 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.
31. Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with CWC section 13320 and CCR, 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.

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IT IS HEREBY ORDERED that, pursuant to California Water Code section 13300, 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 temperature, total residual chlorine and copper limitations in the discharge to the San Gabriel River Estuary contained in Order No. R4-2015-XXXX:

1. Comply immediately with the following interim effluent limits, which shall be deemed effective from November 1, 2015, to October 31, 2020:

Parameter	Units	AMEL	MDEL	Instantaneous Maximum
Temperature	°F	--	--	92 (winter), 103 (summer) ¹
Total residual chlorine	mg/L	--	0.2	--
Copper	µg/L	8.0	9.3	--

¹. Winter months are October to April and summer months are May to September.

2. Achieve full compliance with the final temperature, total residual chlorine and copper limitations in the discharge to the San Gabriel River Estuary as soon as possible, but no later than October 31, 2020.
3. Comply with the schedule as stipulated below:

No.	Task	Deadline
1.	Eliminate the discharge of metal cleaning wastes by containing the chemical metal cleaning wastes from the boilers and transporting it offsite to an authorized hazardous waste facility.	December 1, 2015
2.	Eliminate the discharge of sanitary wastes by constructing a new sewer line that connects to the Los Angeles County Sanitation Districts' wastewater system.	June 30, 2018
3.	Eliminate the discharge of OTC water and low volume wastes through Discharge Point 003 by permanently shutting down units 5 and 6.	December 31, 2019
4.	Eliminate the discharge of OTC water and low volume wastes through Discharge Point 001 by permanently shutting down units 1 and 2.	October 31, 2020
5.	Eliminate the discharge of OTC water and low volume wastes through Discharge Point 002 by permanently shutting down units 3 and 4.	October 31, 2020

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 June 15th and December 15th for the reporting period of November 1st through April 30th and May 1st through October 31st, respectively, and include milestones completed and any new pertinent updates. The first semiannual progress report is due on June 15, 2016 for the November 1, 2015 through April 30, 2016, reporting period.

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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 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 No. R4-2015-XXXX not in conflict with this TSO are in effect on November 1, 2015.
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 immediately upon issuance by the Regional Water Board. This TSO expires on October 31, 2020.

I, Samuel Unger, 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 September 10, 2015.

Samuel Unger, P.E., Executive Officer

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