

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

TIME SCHEDULE ORDER NO. R4-2015-0174-~~A04~~AX

**REQUIRING AES ALAMITOS, LLC  
(ALAMITOS GENERATING STATION)  
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN  
ORDER NUMBER R4-2015-0173  
(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, 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. The Facility discharges industrial storm water runoff to the Los Cerritos Channel Estuary through several outfalls. Storm water monitoring is conducted at three sampling points. Discharge Point O-48 is representative of the storm water runoff from the area around Units 1-4, Discharge Point O-76 is representative of the storm water runoff from the area around the retention basins and Discharge Point O-84 is representative of the storm water runoff from the area around Units 5 and 6. The storm water runoff discharge was previously regulated under statewide General Permit No. CAS000001. Coverage under the General Permit was terminated on October 29, 2002.
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 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

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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.

5. On September 10, 2015, the Regional Water Board adopted Order No. R4-2015-0173, which renewed the waste discharge requirements and NPDES permit for the Alamitos Generating Station. Order No. R4-2015-0173 serves as a permit under the National Pollutant Discharge Elimination System (NPDES No. CA0001139) Program and regulates 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. R4-2015-0173 also incorporates the discharge of industrial storm water runoff to the Los Cerritos Channel Estuary, a water of the United States, at various locations including Discharge Points O-48, O-76 and O-84 where monitoring requirements and numeric effluent limitations were implemented. Order No. R4-2015-0173 became effective on January 1, 2016.
6. 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 (Figures 2-9 and 2-22). 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. R4-2015-0173 reflects the reclassification of the Facility and therefore implements the SIP.
7. 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.
8. Pursuant to the WQOs for existing discharges to estuaries in the Thermal Plan, Order No. R4-2015-0173 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.
9. 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.

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10. Pursuant to the Basin Plan WQO for total residual chlorine, Order No. R4-2015-0173 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.
11. 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 through Discharge Points 001, 002 and 003 are classified as estuarine discharges and therefore the Basin Plan WQO for pH applies.
12. Pursuant to the Basin Plan WQO for pH, Order No. R4-2015-0173 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).
13. The Basin Plan establishes WQOs for bacteria in receiving waters designated for water contact recreation (REC-1). 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 following water quality objectives for marine waters apply:
  - i. *Geometric Mean Limits*
    - (a) *Total coliform density shall not exceed 1,000/100 ml.*
    - (b) *Fecal coliform density shall not exceed 200/100 ml.*
    - (c) *Enterococcus shall not exceed 35/100 ml.*
  - ii. *Single Sample Limits*
    - (a) *Total coliform density shall not exceed 10,000/100 ml.*
    - (b) *Fecal coliform density shall not exceed 400/100 ml.*
    - (c) *Enterococcus shall not exceed 104/100 ml.*
    - (d) *Total coliform density shall not exceed 1,000/100 ml if the ratio of fecal to total coliform exceeds 0.1.*
14. Pursuant to the Basin Plan WQOs for bacteria, Order No. R4-2015-0173 prescribes new effluent limitations for discharges to the San Gabriel River Estuary through Discharge Points 001, 002 and 003 as defined in Finding 13 above. The prior order included an effluent limitation of 103 MPN/100 mL for fecal coliform that was based on requirements of the Ocean Plan. The Monitoring and Reporting Program (Attachment E) for Order No. R4-2015-0173 establishes that for Discharge Points 001, 002, and 003 bacteria sampling shall be required only for those discharge points receiving a sanitary waste discharge from the on-site treatment plant.

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15. The Basin Plan includes the following narrative WQO for Solids, Suspended or Settleable Materials:

*Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses.*

16. For storm water runoff at other industrial facilities within the Region, the Regional Water Board has addressed the Basin Plan WQO for total suspended solids (TSS) through the use of best professional judgment (BPJ) to derive technology-based effluent limitations (TBELs) as authorized under CWA section 402(a)(1) and 40 C.F.R. section 125.3. Due to the intermittent nature of storm water discharges a maximum daily effluent limitation (MDEL) is appropriate. The TBEL typically established for TSS is 75 mg/L (MDEL).

Pursuant to the Basin Plan WQO for Solids, Suspended or Settleable Materials; and based on BPJ; Order No. R4-2015-0173 prescribes a new MDEL for TSS of 75 mg/L for discharges of industrial storm water runoff from the Facility to the Los Cerritos Channel Estuary at Discharge Points O-48, O-76 and O-84. In setting this limitation, the Regional Water Board considered the factors listed in 40 C.F.R. sections 125.3(d)(1) and 125.3(d)(2), respectively. These factors include: cost of application of technology, age of equipment and facilities used, process employed, engineering aspects/control techniques, process changes and non-water quality environmental impacts. At the time of permit issuance, September 10, 2015, the Discharger's past performance indicated the ability to meet the TBELs for TSS and oil and grease using current technology. As the data indicated technology used by the Discharger was capable of meeting the limitations, no changes to equipment, facilities, process, or controls were deemed necessary, thereby incurring no additional costs or non-water quality environmental impacts.

17. The Basin Plan incorporates by reference WQOs for receiving waters based on the Thermal Plan. The Facility, as presently operating, is considered an "existing discharge" per Definition 10 of the Thermal Plan. Definition 10 states that an "existing discharge" includes "any discharge which is presently taking place" at the time of adoption of the plan on January 7, 1971. The Facility began discharging in 1967, prior to the adoption of the Thermal Plan. The Thermal Plan includes the following WQOs for receiving waters for existing discharges to estuaries

Elevated temperature waste discharges shall comply with the following:

- The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F.
- Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.
- No discharge shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place.
- Additional limitations shall be imposed when necessary to assure protection of beneficial uses.

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Discharges from the Facility to the San Gabriel River Estuary through Discharge Points 001, 002 and 003 are classified as existing estuarine discharges and therefore the Thermal Plan temperature WQOs for receiving waters apply.

18. Pursuant to the Basin Plan and the Thermal Plan temperature WQOs for receiving waters, Order No. R4-2015-0173 prescribes new receiving water limitations that state “The discharge shall not cause the following in the San Gabriel River Estuary: Elevated waste discharge with a maximum temperature that exceeds the natural receiving water temperature by more than 20°F. Surface water temperature to rise greater than 4°F above the natural temperature of the receiving waters at any time or place. Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperature of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.” The prior order did not contain receiving water limitations for temperature as per the Thermal Plan because the discharge was an ocean discharge subject to Ocean Plan limits. The discharge was classified as an inland surface water discharge on July 18, 2001 and the Regional Water Board informed the Discharger on January 21, 2003 of the reclassification of the facility to an estuarine discharger. Therefore, the Thermal Plan estuary requirements are applicable.
19. The Discharger may not be able to immediately comply with the receiving water temperature requirements as stipulated in the Thermal Plan. However, a review of temperature data from annual receiving water monitoring reports from the years 1998 to 2014 demonstrates that the discharge will be able to meet a maximum receiving water temperature of 86°F during winter (October to April) and 90°F during summer (May to September) seasons at Receiving Water Station RW-11, located just downstream of the Facility.
20. 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 River 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.
21. Pursuant to the San Gabriel River Metals and Selenium TMDL, Order No. R4-2015-0173 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.
22. 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

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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).

23. Pursuant to the procedures outlined in the SIP, Order No. R4-2015-0173 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. R4-2015-0173 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. R4-2015-0173 also prescribes new effluent limitations of, and 3.2 µg/L AMEL and 5.5 µg/L MDEL for copper. As previously discussed, Order R4-2015-0173 establishes TMDL-based dry weather effluent limitations for copper. Therefore, the CTR-based limitations for copper apply during wet 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.
24. Pursuant to the Basin Plan WQOs for ammonia as nitrogen, Order No. R4-2015-0173 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.
25. Pursuant to the Basin Plan WQOs for bacteria, Order No. R4-2015-0173 prescribes new effluent limitations for *Enterococcus*, fecal coliform and total coliform as described in Finding 13 above. The prior order did not contain effluent limitations for bacteria based on Basin Plan WQOs because the discharge was classified as an ocean discharge and therefore included the requirements of the California Ocean Plan.
26. The effluent limitation changes in Order No. R4-2015-0173 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:

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Parameter	Units	Order No. 00-082 Limitations			Order No. R4-2015-0173 Limitations		
		AMEL	MDEL	Max	AMEL	MDEL	Max
Temperature	°F	--	--	105 <sup>1</sup>	--	--	86 <sup>2</sup>
Total Residual Chlorine	mg/L	--	0.45 <sup>3</sup>	--	--	0.1 <sup>4</sup>	--
Copper, Total Recoverable, Dry Weather <sup>5</sup>	µg/L	8 <sup>6</sup>	57 <sup>6</sup>	--	2.7 <sup>7</sup>	4.6 <sup>7</sup>	--
Copper, Total Recoverable, Wet Weather <sup>5</sup>	µg/L	8 <sup>6</sup>	57 <sup>6</sup>	--	3.2 <sup>8</sup>	5.5 <sup>8</sup>	--
Nickel, Total Recoverable	µg/L	28 <sup>6</sup>	112 <sup>6</sup>	--	5.3 <sup>8</sup>	15 <sup>8</sup>	--
Bis(2-ethylhexyl)phthalate	µg/L	--	--	--	5.9 <sup>8</sup>	19 <sup>8</sup>	--
Ammonia as N	mg/L	--	--	--	0.57 <sup>9</sup>	1.33 <sup>9</sup>	--
pH	s.u.	--	--	6.0-9.0 <sup>10</sup>	--	--	6.5-8.5 <sup>4</sup>
Bacteria		11			12		
<ol style="list-style-type: none"> <li>1. Limitation from the Thermal Plan WQO for existing ocean discharge.</li> <li>2. Limitation from the Thermal Plan WQO for existing estuarine discharge.</li> <li>3. Limitation based on EPA-approved variance from standards for ocean discharge.</li> <li>4. Limitation based on Basin Plan WQO.</li> <li>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.</li> <li>6. Limitation based on Ocean Plan WQOs.</li> <li>7. Limitation based on RPA using SIP procedures and San Gabriel River Metals and Selenium TMDL WLAs.</li> <li>8. Limitation based on RPA using SIP procedures and CTR criteria.</li> <li>9. Limitation based on Basin Plan WQOs.</li> <li>10. Limitation based on ELG at 40 C.F.R section 423.12(b)(1).</li> <li>11. Fecal coliform shall not exceed a log mean of 200 MPN/100 mL.</li> <li>12. Effluent limitations for bacteria are described below:                         <ol style="list-style-type: none"> <li>a. Geometric Mean Limits                                 <ol style="list-style-type: none"> <li>i. Total coliform density shall not exceed 1,000/100 ml.</li> <li>ii. Fecal coliform density shall not exceed 200/100 ml.</li> <li>iii. <i>Enterococcus</i> shall not exceed 35/100 ml.</li> </ol> </li> <li>b. Single Sample Limits                                 <ol style="list-style-type: none"> <li>i. Total coliform density shall not exceed 10,000/100 ml.</li> <li>ii. Fecal coliform density shall not exceed 400/100 ml.</li> <li>iii. <i>Enterococcus</i> shall not exceed 104/100 ml.</li> <li>iv. Total coliform density shall not exceed 1,000/100 ml, if the ratio of fecal-to-total coliform exceeds 0.1.</li> </ol> </li> </ol> </li> </ol>							

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27. 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. R4-2015-0173. 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.
28. Based on monitoring data 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 River Estuary through Discharge Points 001, 002 and 003 complied with the new effluent limitations contained in Order No. R4-2015-0173 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.

29. Based on monitoring data 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 River Estuary through Discharge Points 001, 002 and 003 did not comply with the new effluent limitations contained in Order No. R4-2015-0173 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.
30. On August 15, 2015, the Discharger met with Regional Water Board staff and requested additional time – up to December 31, 2020, to achieve compliance with the new receiving water limitations for temperature contained in Order No. R4-2015-0173. The request was reiterated in the comment letter from the Discharger submitted on August 21, 2015.
31. Based on monitoring data 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 River Estuary through Discharge Points 001, 002 and 003 did not comply with the new receiving water limitations for temperature contained in Order No. R4-2015-0173. 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.
32. On September 10, 2015, the Regional Water Board adopted TSO No. R4-2015-0174 concurrently with the adoption of Order No. R4-2015-0173. The tentative order included new effluent limitations for bacteria with monitoring requirements at the on-site waste treatment plant only. During the hearing, Heal the Bay requested that effluent monitoring requirements be added for bacteria at Discharge Points 001, 002 and 003 for the purpose of determining compliance. The Board agreed and the change was made prior to the adoption of Order No. R4-2015-0173. TSO No. R4-2015-0174 was also adopted and it did not include interim requirements for bacteria.
33. On January 21, 2016, the Discharger met with Regional Water Board staff and discussed the possibility of an amendment to TSO No. R4-2015-0174 to include interim requirements for bacteria. Staff instructed the Discharger to submit a written request for an amendment. The cover letters for the First, Second and Third Quarter monitoring reports dated April 29, 2016, August 1, 2016, and November 1, 2016 indicated the Discharger's intention to submit a TSO amendment request to address bacteria violations but no actual written request was received.
34. On November 13, 2016, the Discharger submitted a written request for additional time, up to December 31, 2020, to achieve compliance with the new effluent limitations for bacteria at Discharge Points 001, 002 and 003; and the new effluent limitation for TSS at Discharge Points O-48, O-76 and O-84 contained in Order No. R4-2015-0173. The written request referenced monitoring data from March 2016 that exceeded the effluent limitations established in Order No. R4-2015-0173 for *Enterococcus*. Regional Water Board staff evaluated this request coupled with monitoring data submitted by the Discharger for the period of March 2016 through September 2016.

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35. Based on the monitoring data submitted by the Discharger for the period of March 2016 through September 2016, the Regional Water Board finds that the discharge to the San Gabriel River Estuary through Discharge Point 002 complied with the new, single sample effluent limitations contained in Order No. R4-2015-0173 for fecal coliform in 16 out of 16 samples and for total coliform in 16 out of 16 samples (Discharge Points 001 and 003 did not receive a sanitary waste discharge from the on-site treatment plant during this period and therefore were not monitored per the permit requirements noted in Finding 14 above). Accordingly, the Regional Water Board finds that an interim limitation is not necessary for these constituents.
36. Based on monitoring data submitted by the Discharger for the period of March 2016 through September 2016, the Regional Water Board finds that the discharge to the San Gabriel River Estuary through Discharge Point 002 did not comply with the new, single sample effluent limitations contained in Order No. R4-2015-0173 for *Enterococcus* in 16 out of 16 samples; and did not comply with the new, geometric mean effluent limitation for *Enterococcus* in 3 out of 3 calculating periods (Discharge Points 001 and 003 did not receive a sanitary waste discharge from the on-site treatment plant during this period and therefore were not monitored per the permit requirements noted in Finding 14 above). 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.
37. Based on monitoring data submitted by the Discharger for the period of March 2016 through September 2016, the Regional Water Board finds that the discharge to the Los Cerritos Channel Estuary through Discharge Points O-48, O-76 and O-84 did not comply with the new effluent limitation contained in Order No. R4-2015-0173 for TSS in 1 out of 3 samples for O-48, in 1 out of 1 sample for O-76 and in 3 out of 3 samples for O-84. 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.
38. 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.”
39. 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. R4-2015-0173 for total residual chlorine, temperature, copper and *Enterococcus* for the discharge of commingled waste water to the San Gabriel River Estuary through Discharge Points 001, 002 and 003. The Regional Water Board finds that interim limitations for these constituents are appropriate.
40. The Regional Water Board evaluated the request for interim limitations and determined that the discharge of industrial storm water from the Facility cannot consistently meet the new limitation contained in Order No. R4-2015-0173 for total suspended solids (TSS) to the Los

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Cerritos Channel Estuary through Discharge Points O-48, O-76 and O-84. The Regional Water Board finds that an interim limitation for this constituent is appropriate.

41. The Regional Water Board evaluated the request for additional time to achieve compliance with the new receiving water limitations for temperature contained in Order No. R4-2015-0173 and determined that the granting of additional time is appropriate. Therefore, the Regional Water Board finds that an interim maximum receiving water limit of 86°F, as measured at Receiving Water Station RW-11, located just downstream of the Facility, is appropriate.
42. 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).
43. In order to comply with the temperature, total residual chlorine, copper and *Enterococcus* limitations in the discharge to the San Gabriel River Estuary, the Discharger will cease the discharge of OTC water, low volume 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 Amended Time Schedule Order (TSO) in recognition that the Discharger needs time to complete necessary studies, and implement appropriate control measures. Through this Amended TSO, the Discharger will be required to comply with the final temperature, total residual chlorine, copper and *Enterococcus* limitations in the discharge to the San Gabriel River Estuary no later than December 31, 2020.
44. 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. Upon compliance with the OTC Policy, the only discharge from the Facility will be storm water runoff. The Regional Water Board issues this Amended TSO in recognition that the Discharger needs time to complete necessary studies, and implement appropriate control measures. Through this Amended 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, 2020.
45. In accordance with Water Code section 13385, subdivision (j)(3)(B)(i), the Regional Water Board finds that: (a) the final temperature, total residual chlorine, copper and *Enterococcus* effluent limitations for the discharge to the San Gabriel River Estuary are new limitations in Order No. R4-2015-0173, (b) the Discharger needs to implement new or modified control measures in order to comply with the new temperature, total residual chlorine, copper and *Enterococcus* effluent limitations, and (c) the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
46. In accordance with Water Code section 13385, subdivision (j)(3)(B)(i), the Regional Water Board finds that: (a) the final TSS limitation for the discharge of industrial storm water to the Los Cerritos Channel Estuary is a new limitation in Order No. R4-2015-0173, (b) the Discharger needs to implement new or modified control measures in order to comply with

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the new TSS industrial storm water limitation, and (c) the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

47. 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, copper and *Enterococcus* 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.
48. Therefore, this Amended TSO establishes interim effluent limitations for temperature, total residual chlorine, copper and *Enterococcus* for the discharge to the San Gabriel River Estuary. 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.
49. The interim limitations for *Enterococcus* have been established based on a statistical analysis of data submitted by the Discharger. The single sample limitation is established at 2,429/100 ml based on the 99th percentile of the 16 results analyzed. The geometric mean limitation is 935/100 ml based on the maximum of the three calculating periods analyzed.
50. This Amended TSO also establishes an interim MDEL for TSS for the discharge to the Los Cerritos Channel Estuary. The interim MDEL for TSS is established at the 99th percentile based on a statistical analysis of data submitted by the Discharger. The calculation results in an interim limitation for TSS of 385 mg/L.
51. The exceedances allowed by this Amended 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 and the final industrial storm water limitations for the discharge to the Los Cerritos Channel Estuary.
52. Pursuant to Water Code section 13385, subdivision (j)(3), full compliance with the requirements of this Amended TSO exempts the Permittee from mandatory minimum penalties only for violations of the final temperature, total residual chlorine, copper and *Enterococcus* 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 No. R4-2015-0173 that occur after the effective date of this Amended TSO.
53. This Amended TSO concerns an existing facility and does not significantly alter the status with respect to the facility. This Amended TSO is also being taken for the protection of the environment. Therefore, issuance of this Amended 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).
- ~~54. The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to issue this Amended TSO concerning compliance with waste discharge~~

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~~requirements~~ TSO No. R4-2015-0174-A01, and ~~has~~ provided them with an opportunity to submit written comments. On March 6, 2017, the Regional Water Board received written comments ~~pertinent to this matter~~ from Heal the Bay and from the Discharger. The Regional Water Board considered these comments and made the requested minor changes with two exceptions. The Discharger correctly pointed out an error in the historical effluent limitation for fecal coliform in footnote 11 of the Finding 26 table, but incorrectly described the value as a “monthly average” when it is actually a “log mean”. The Regional Water Board therefore corrected the value but did not add the requested description. The Discharger also requested that the effective date ~~of the Amended TSO~~ be established at January 1, 2016. No legal authority was cited in the Discharger’s letter that allows for the retroactive application of a TSO. The effective date was therefore not changed.

55. On March 14, 2017, the Executive Officer, pursuant to delegated authority from the Regional Water Board, issued TSO No. R4-2015-0174-A01 that amended TSO No. R4-2015-0174 to include interim effluent limitations for *Enterococcus* at Discharge Points 001, 002 and 003 and an interim industrial storm water limitation for total suspended solids at Discharge Points O-48, O-76 and O-84.

56. On March 12, 2018, the Discharger submitted a request to the Regional Water Board to modify the compliance deadlines stipulated by TSO No. R4-2015-0174-A01. The request discussed the City of Long Beach sewer line permitting process and grid reliability issues involving the California Independent System Operator (CAISO), Southern California Edison (SCE) and the California Public Utilities Commission (CPUC). The requested modifications and the rationale provided by the Discharger are summarized in the following table:

<u>No.</u>	<u>Task</u>	<u>Original Deadline</u>	<u>Requested Deadline</u>	<u>Rationale</u>
<u>2.</u>	<u>Eliminate the discharge of sanitary wastes by constructing a new sewer line that connects to the Los Angeles County Sanitation Districts’ wastewater system.</u>	<u>06/30/2018</u>	<u>09/30/2018</u>	<u>The sewer line work required review by two City of Long Beach departments (Water Department and Public Works) prior to issuance of a permit. The sewer line plans were initially submitted on May 5, 2017. A permit was issued in early March 2018. A construction contract has been awarded, but the Discharger does not expect to meet the June 30, 2018 deadline.</u>
<u>3.</u>	<u>Eliminate the discharge of OTC water and low volume wastes through Discharge Point 003 by permanently shutting down units 5 and 6.</u>	<u>12/31/2019</u>	<u>Unit 6: 12/31/2019 Unit 5: 12/31/2020</u>	<u>CPUC approved Resolution E-4865, a Resource Adequacy contract between the Discharger and SCE, on August 10, 2017. Resolution E-4865 requires Unit 5 to deliver power through December 31, 2020. Unit 6 will shut down permanently by December 31, 2019 per the original deadline.</u>
<u>4.</u>	<u>Eliminate the discharge of OTC water and low volume wastes through Discharge Point 001 by permanently shutting down units 1 and 2.</u>	<u>12/31/2020</u>	<u>12/31/2019</u>	<u>Permanent retirement of Units 1 and 2 is necessary by December 31, 2019 to enable the electrical interconnection of the new combined-cycle generating units. This date is included in Resolution E-4865.</u>

57. The Regional Water Board evaluated the request for modification of the compliance schedule stipulated in TSO No. R4-2015-0174-A01 and determined that the modification is appropriate. Therefore, the Regional Water Board has revised the compliance schedule in

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this Amended TSO as requested. These modifications 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 OTC Policy and the final effluent limitations established in Order No. R4-2015-0173.

54.58. The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to issue this Amended TSO concerning compliance with waste discharge requirements, and has provided them with an opportunity to submit written comments.

55.59. 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](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 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, copper and *Enterococcus* 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 No. R4-2015-0173:

1. Comply immediately with the following interim effluent limits at Discharge Points 001, 002 and 003, which shall be deemed effective from the effective date of this Amended TSO to December 31, 2020:

Parameter	Units	AMEL	MDEL	Instantaneous Maximum
Temperature	°F	--	--	105
Total residual chlorine	mg/L	--	0.2	--
Copper <sup>1</sup>	µg/L	8.0	9.3	--
<i>Enterococcus</i>			<sup>2</sup>	

1. The interim effluent limitation for copper applies during both dry and wet weather conditions.
2. Effluent limitations for *Enterococcus* are described below:
  - a. Geometric Mean Limit  
*Enterococcus* density shall not exceed 935/100 ml.
  - b. Single Sample Limit  
*Enterococcus* 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, O-76 and O-84, which shall be deemed effective from the effective date of this TSO Amendment to December 31, 2020:

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

- Comply immediately with the following interim receiving water limit, which shall be deemed effective from the effective date of this Amended TSO to December 31, 2020.

Parameter	Units	AMEL	MDEL	Instantaneous Maximum
Temperature	°F	--	--	86 winter, 90 summer <sup>1</sup>
<sup>1.</sup> Winter months are October to April, summer months are May to September. Based on temperature as measured at Receiving Water Station RW-11, located just downstream of the Facility.				

- Achieve full compliance with the final temperature, total residual chlorine, copper and *Enterococcus* 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, 2020.
- Achieve full compliance with the final receiving water limitations for temperature in the San Gabriel River Estuary as soon as possible, but no later than December 31, 2020.
- Comply with the schedule as stipulated below:

No.	Task	Deadline
1.	Implement the March 2016 updated Storm Water Pollution Prevention Plan (SWPPP)	Effective March 2016
2.	Eliminate the discharge of sanitary wastes by constructing a new sewer line that connects to the Los Angeles County Sanitation Districts' wastewater system.	<del>June-September</del> 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.	<del>Unit 6:</del> December 31, 2019 <del>Unit 5:</del> December 31, 2020
4.	Eliminate the discharge of OTC water and low volume wastes through Discharge Point 001 by permanently shutting down units 1 and 2.	December 31, <del>2020</del> 2019
5.	Eliminate the discharge of OTC water and low volume wastes through Discharge Point 002 by permanently shutting down units 3 and 4.	December 31, 2020

- 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

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semiannual progress report is due on August 15, 2016 for the January 1, 2016 through June 30, 2016, reporting period. The first semiannual progress report due under this amended TSO is August 15, ~~2017~~2018.

7. Any person signing a document submitted under this Amended 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."

8. If the Permittee fails to comply with any provision of this Amended 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.
9. All other provisions of Order No. R4-2015-0173 not in conflict with this Amended TSO are in effect on January 1, 2016.
10. The Regional Water Board may reopen this Amended 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.
11. This Amended TSO becomes effective immediately upon issuance and it expires on December 31, 2020.

IT IS SO ORDERED:

Samuel Unger, P.E. Deborah J. Smith  
Executive Officer

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