

STATE OF CALIFORNIA  
STATE WATER RESOURCES CONTROL BOARD  
ORDER WQ 2022-XXXX

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In the Matter of the Petition of

**AES REDONDO BEACH, LLC**

For Review of  
the Los Angeles Regional Water Quality Control Board's Failure to Adopt a Time  
Schedule Order for the Redondo Beach Generating Station

**SWRCB/OCC FILE A-2779**

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BY THE BOARD:

In this order, the State Water Resources Control Board (State Water Board) reviews the California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board)'s failure to adopt a proposed Time Schedule Order (TSO) for the Redondo Beach Generating Station (Facility) on December 9, 2021. The proposed TSO included a time schedule to correct violations of effluent limitations for five pollutants included in the National Pollutant Discharge Elimination System (NPDES) permit regulating the Facility's discharge and would have exempted violations of those effluent limitations from the assessment of mandatory minimum penalties during that time schedule.

AES Redondo Beach, (LLC) (Petitioner), the operator of the Facility, filed a petition for review with the State Water Board on January 6, 2022 but asked that the matter be put into abeyance so that it could present to the Los Angeles Water Board a more limited TSO addressing effluent limitations for only two pollutants. Petitioner's presentation occurred during an information item at the March 10, 2022 Los Angeles Water Board meeting. At the conclusion of the information item, the Los Angeles Water Board

declined to direct its staff to prepare the more-limited TSO for the board's consideration. As a result, Petitioner activated its petition on March 24, 2022, and requested the State Water Board to issue the more-limited TSO.

For the reasons discussed below, the State Water Board concludes that the more-limited TSO is appropriate for the Facility and issues the order set forth in Section IV below.<sup>1</sup> Due to the unique factual circumstances presented by this petition, this order shall have no precedential effect.

## I. BACKGROUND

On May 5, 2010, the State Water Board adopted the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (OTC Policy or Policy). The OTC Policy implements Clean Water Act section 316(b),<sup>2</sup> which directs that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. The Policy's preferred compliance alternative requires power plant operators to reduce intake flow rate at each unit to a level commensurate with that which can be attained by a closed-cycle wet cooling system.<sup>3</sup> The Policy established final compliance dates for California's nineteen then-existing coastal power plants using once-through cooling technology to

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<sup>1</sup> Pursuant to Water Code section 13320, subdivision (c), the State Water Board, when reviewing a petition for review of any action or failure to act by a regional water board, may take the appropriate action itself. In taking any action, the State Water Board is vested with all the powers of the regional boards under Division 7 of the Water Code.

<sup>2</sup> Federal Water Pollution Control Act, 33 U.S.C.A. § 1326, subd. (b).

<sup>3</sup> OTC Policy Track 1 compliance is defined as a minimum 93 percent reduction in intake flow rate for each unit, as compared to the unit's design intake flow rate, coupled with a 0.5 foot-per-second limitation on through-screen velocity. A second alternative allows comparable reductions to impingement mortality and entrainment of marine life through other measures only if Track 1 is shown to be infeasible. (OTC Policy, Section 2.A.)

comply with the Policy and to reduce impingement and entrainment of marine life.<sup>4</sup> The Policy also convened a Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS)<sup>5</sup> energy and environmental agencies to advise the State Water Board on grid reliability concerns and to make any needed recommendations on revisions to the compliance schedule to ensure that the state's electrical power needs are met throughout Policy implementation.

Petitioner owns and operates the Facility, which is an 834-megawatt steam electric generating facility located in Redondo Beach that uses once-through-cooling technology. The OTC Policy originally assigned December 31, 2020, as the compliance date for the Facility. Petitioner initially sought to retrofit the Facility with a non-water-cooled system but later abandoned these plans and sold the property, intending to retire the Facility upon reaching the compliance deadline.<sup>6</sup>

In early 2020, the SACCWIS recommended extending the OTC Policy compliance date for the Facility (and three other power plants) due to grid reliability concerns. On September 1, 2020, the State Water Board amended the OTC Policy to extend the compliance schedule for the Facility to December 31, 2021, in accordance with the

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<sup>4</sup> Impingement occurs when aquatic organisms are trapped against a facility's intake screens and cannot escape. Entrainment occurs when smaller organisms, such as larvae and eggs, are drawn through a facility's cooling system and later discharged along with heated cooling water and other facility wastewater. (Final Substitute Environmental Document, Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling (May 4, 2010), p. 1.)

<sup>5</sup> The Policy establishes the following member agencies or entities for the SACCWIS: California Energy Commission, California Public Utilities Commission, California Independent System Operator, California Coastal Commission, State Lands Commission, California Air Resources Board, and State Water Board. (OTC Policy Section 3.B.)

<sup>6</sup> While Petitioner no longer owns the property, it currently leases it from the new owner during the remainder of the scheduled operation.

SACCWIS recommendation.<sup>7</sup> In March 2021, the SACCWIS again recommended extending the Facility's compliance date for grid reliability reasons, seeking two additional years. The State Water Board adopted another OTC Policy amendment in October 2021, extending the compliance date to December 31, 2023.<sup>8</sup> Both Resolution 2020-0029 and 2021-0048 explain our rationale for the limited extensions of the Facility's final compliance dates based on SACCWIS's recommendations, the actions of other state agencies, and the joint policy objectives of reducing adverse impacts on marine life while promoting reliability of the electrical grid relied upon by millions of Californians and the California economy. The Petitioner now plans to shut down all units upon reaching the current compliance date of December 31, 2023.

The Los Angeles Water Board regulates the discharge from the Facility via waste discharge requirements that serve as an NPDES permit pursuant to California Water Code section 13376. The Facility's discharge consists primarily of once-through-cooling water, but it also contains low volume wastewater, stormwater, and groundwater seepage from the Facility. Los Angeles Water Board Order No. R4-2016-0222 as amended by Order R4-2016-0222-A01 (2016 Permit) is the current NPDES permit for the Facility and sets forth applicable effluent limitations and other requirements governing the Facility's discharge.<sup>9</sup> While the Facility has been regulated by the Los Angeles Water Board for

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<sup>7</sup> State Water Board Resolution No. 2020-0029, Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to Revise Schedules for Alamitos, Huntington Beach, and Redondo Beach Generating Stations and Diablo Canyon Nuclear Power Plant (Sept. 1, 2020). The OTC Policy amendment extended schedules for Alamitos Generating Station, Huntington Beach Generating Station and Ormond Beach Generating Station by three years each.

<sup>8</sup> State Water Board Resolution No. 2021-0048, Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling to Revise the Compliance Schedule for Redondo Beach Generating Station (Oct. 19, 2021).

<sup>9</sup> Los Angeles Water Board Order No. R4-2016-0222 was adopted June 9, 2016, and subsequently amended by Los Angeles Water Board Order No. R4-2016-0222-A01 on December 10, 2020. The December 2020 amendment to the 2016 Permit modified the earlier order to reflect the date set forth in the OTC compliance schedule but did not revise the effluent limitations.

many years, the 2016 Permit for the first time reflects a 2001 determination by the State Water Board that one of the Facility's two discharge points, located inside King Harbor, is a discharge to an enclosed bay rather than an ocean discharge.<sup>10</sup> As a result, more stringent water quality objectives apply to the King Harbor discharge, and the waste discharge requirements must contain more protective effluent limitations to meet the water quality objectives.

On the same date that it adopted the 2016 Permit, the Los Angeles Water Board adopted TSO R4-2016-0223 at Petitioner's request because Petitioner was unable to meet four new effluent limitations in the 2016 Permit that were more stringent than the effluent limitations that previously applied to the King Harbor discharge point.<sup>11</sup> Water Code section 13300 authorizes the issuance of a TSO where the State Water Board or a regional water board finds that a discharge of waste is taking place that violates or will violate requirements prescribed by the board. A TSO establishes a time schedule of specific actions a discharger must take in order to correct or prevent a violation of requirements.<sup>12</sup>

California Water Code section 13385, subdivision (a)(2), authorizes the imposition of discretionary administrative civil liabilities for violations of NPDES permits. In addition, Water Code section 13385, subdivision (h) requires that \$3,000 mandatory minimum penalties (MMPs) be assessed for each "serious violation,"<sup>13</sup> while subdivision (i) requires

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<sup>10</sup> Memorandum from Celeste Cantú, State Water Board Executive Director, to Dennis Dickerson, Los Angeles Water Board Executive Officer, re: Applicability of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays and Estuaries of California (SIP) to Dischargers from Generating Stations in the Los Angeles Region, July 18, 2001. (Administrative Record, p. AR-0032.)

<sup>11</sup> TSO R4-2016-0223 also addressed a new effluent limitation for pH in the 2016 Permit that applied to the low volume wastewater.

<sup>12</sup> Wat. Code, § 13300.

<sup>13</sup> Water Code section 13385, subdivision (h)(2) defines "serious violation" with respect to identified percentage exceedances of effluent limitations for specified pollutants set forth in federal regulations (40 C.F.R. § 123.45, App. A).

that \$3,000 MMPs be assessed for the fourth violation and each subsequent violation of an effluent limitation if there are four or more violations of effluent limitations in a six-month period.<sup>14</sup> Section 13385 also provides several exemptions from the assessment of MMPs. Relevant here, Water Code section 13385, subdivision (j)(3) provides an exemption from MMPs for violations of qualifying effluent limitations where the discharge is in compliance with a TSO issued pursuant to section 13300 that meets specified conditions.<sup>15</sup> In order for the exemptions from MMPs to apply, the regional board must make one of several findings, including that the effluent limitation is a new, more stringent, or modified regulatory requirement applying to the waste discharge after a certain date, new control measures are necessary for compliance, and such measures cannot be designed, installed or put into operation within 30 calendar days.<sup>16</sup> With the TSO in place, Petitioner was subject only to discretionary liability for any violations of the 2016 Permit's corresponding effluent limitations. Because the TSO included interim effluent limitations that applied in lieu of the 2016 Permit's effluent limitations, Petitioner was subject to MMPs for any violations of those interim limitations.<sup>17</sup>

The initial TSO adopted by the Los Angeles Water Board on June 9, 2016, included a finding that it was appropriate to include a time schedule to correct the anticipated violations of the 2016 Permit's new effluent limitations for temperature, pH,

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<sup>14</sup> The MMP is not assessed for the first three violations.

<sup>15</sup> The TSO must also "specif[y] the actions that the discharger is required to take in order to correct the violations." (Wat. Code, § 13385, subd. (j)(3)(A).) A TSO with a time schedule longer than one year must also include "interim requirements and dates for their achievement [which shall include] effluent limitations for the pollutant or pollutants of concern [and] [a]ctions and milestones leading to compliance with the effluent limitation." (Wat. Code, § 13385, subd. (j)(3)(C)(iii).) The discharger must also prepare and implement a pollution prevention plan meeting Water Code section 13263.3. (Wat. Code, § 13385, subd. (j)(3)(D).)

<sup>16</sup> Wat. Code, § 13385, subd. (j)(3)(B)(i).

<sup>17</sup> Wat. Code, § 13385, subds. (h), (i) and (j); Wat. Code, § 13385.1, subd. (d).

copper, and nickel.<sup>18</sup> The Los Angeles Water Board found that the time schedule lasting until December 31, 2020, allowed appropriate time for Petitioner to complete the actions necessary to ensure grid reliability and to bring the Facility into compliance with the 2016 Permit's effluent limitations by shutting down its remaining operational generating units and ceasing its discharges.<sup>19</sup> The TSO was amended in 2017 to add a similar time schedule for the effluent limitation for dichloro-diphenyl trichloroethane (DDT), and in 2018 to reflect a change in the time schedule requested by Petitioner.<sup>20</sup> Following the State Water Board's 2020 OTC Policy amendment, the Los Angeles Water Board adopted a new TSO, adjusting the time schedule to match the new OTC Policy compliance deadline of December 31, 2021. The Los Angeles Water Board found that Petitioner had "made diligent progress toward compliance with the temperature, pH, copper, nickel, and DDT effluent limitations," implementing actions associated with OTC Policy compliance, including permanent shutdown of Unit 7 on September 30, 2019.<sup>21</sup>

In anticipation of the State Water Board's consideration and subsequent adoption of the additional two-year OTC Policy compliance date extension, Petitioner submitted a request to the Los Angeles Water Board on September 15, 2021, seeking an extension of the TSO's time schedules to December 31, 2023 to be consistent with the expected new OTC compliance deadline. On December 9, 2021, Los Angeles Water Board staff presented a draft TSO for the Los Angeles Water Board's consideration at a public hearing that would extend the time schedules to December 31, 2023. The Los Angeles Water Board declined to adopt the TSO, and Petitioner filed its petition for State Water

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<sup>18</sup> TSO No. R4-2016-0223 (June 9, 2016). The TSO also includes a number of actions and milestones, including: evaluating and constructing engineering controls for pH in low volume wastes; determining economic practicality of continued operations of units 5 – 8; eliminating discharge of OTC water from units 6 and 8 by December 31, 2018; and eliminating the discharge of OTC water from units 5 and 7 by December 31, 2020.

<sup>19</sup> *Id.*, Findings 21, 24.

<sup>20</sup> TSO No. R4-2016-0223-A01 (Nov. 30, 2017); TSO No. R4-2016-0223-A01 (Dec. 21, 2018).

<sup>21</sup> TSO No. R4-2020-0139 (Dec. 10, 2020), Finding 11.

Board review of the matter and simultaneously asked the State Water Board to hold the petition in abeyance.

While the petition was in abeyance, Petitioner submitted a revised request to the Los Angeles Water Board, seeking a more limited TSO, having concluded based upon monitoring data that the Facility could comply with the 2016 Permit's effluent limitations for copper, nickel and pH. In contrast to the prior TSO and the new TSO requested on September 15, 2021, Petitioner's modified request sought a time schedule only for the 2016 Permit's effluent limitations for DDT and temperature. The Los Angeles Water Board staff sought additional direction from the Los Angeles Water Board during an information item at its March 10, 2022 Board Meeting, but the Los Angeles Water Board declined to direct its staff to prepare a modified TSO for its consideration.

In response, Petitioner removed its petition from abeyance and submitted a modified request to the State Water Board, seeking a TSO only for DDT and temperature. The State Water Board found the petition complete on May 12, 2022, solicited responses to the petition, and initiated its review.<sup>22</sup>

## **II. ISSUES AND FINDINGS**

The petition raises two related contentions: that the Los Angeles Water Board's failure to adopt a TSO was inappropriate because continued operation of the Facility is necessary to ensure grid reliability, and because any additional actions to treat the

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<sup>22</sup> The State Water Board received responses to the petition from the Los Angeles Water Board and the City of Redondo Beach. In addition, the State Water Board received letters from the California State Association of Electrical Workers, the California State Pipe Trades Council, the Coalition of California Utility Employees, the Western States Council of Sheet Metal Workers International Brotherhood of Electrical Workers, AFL-CIO, Local Union Number 11, the Southern California Pipe Trades District Council 16, Independent Energy Producers Association and CREED LA. These organizations expressed only general support for continued operation of the Facility without addressing the underlying issue of the TSO. As discussed below, Petitioner also responded to queries posed in the May 12, 2022 letter.

discharge to comply with the 2016 Permit's effluent limitations for temperature and DDT would be wholly impractical for a Facility intended for shutdown.

### **A. Grid Reliability Concerns**

In 2020, we extended the OTC Policy compliance date for the Facility to December 31, 2021, in response to specific recommendations of the SACCWIS. Planning for energy supplies indicated potential shortfalls beginning in summer of 2021 due to several compounding events. Peak energy demand had shifted to later in the day and later in the year when solar and wind resources are not as reliably available to meet energy needs. Significant increases in projected reliance on electricity imports contributed, as did closures of some non-OTC generating facilities earlier than anticipated. The SACCWIS concluded that “[a]dditional power is likely needed for summer peak usage on hot days.”<sup>23</sup> Further energy reliability concerns were identified following analysis of blackouts that occurred during a prolonged and extreme heat storm in August 2020, leading to a 2021 SACCWIS recommendation for an additional two-year extension of the Facility compliance date to December 31, 2023.<sup>24</sup>

As part of both OTC Policy amendments, we considered a broad range of potential issues associated with revising the compliance dates for OTC facilities otherwise scheduled to shut down in order to meet the Policy's requirements. We acknowledged that continued operation of aging OTC power plants has a broad range of adverse effects, including impacts to water quality, marine life, and air quality, as well as delaying or frustrating planning efforts to transition to more environmental- and community-friendly

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<sup>23</sup> Statewide Advisory Committee on Cooling Water Intake Structures, Final Recommended Compliance Date Extensions for Alamitos, Huntington Beach, Ormond Beach and Redondo Beach Generating Stations (Jan. 23, 2020), p. 6.

<sup>24</sup> Statewide Advisory Committee on Cooling Water Intake Structures, Final Recommended Compliance Date Extension for Redondo Beach Generating Station (Mar. 26, 2021), p. 6.

land uses.<sup>25</sup> Nonetheless, the OTC Policy explicitly recognizes the need to balance protecting the beneficial uses of the State’s coastal and estuarine waters “while also ensuring that the electrical power needs essential for the welfare of the citizens of the State are met.”<sup>26</sup> Our concern for local communities affected by the continued operation of these facilities has been an important consideration but could not outweigh the continued and substantial challenges presented by the need for maintaining grid reliability.

The Los Angeles Water Board in its petition response contends that the absence of a TSO applying to the Facility has no impact on grid reliability or Petitioner’s ability to operate and provide power.<sup>27</sup> The City of Redondo Beach (City) also responded to the petition, arguing that grid reliability needs provide no justification for issuance of the TSO.<sup>28</sup> The City argues that the Facility can continue to operate without the TSO and that the additional weight afforded by the State Water Board to the recommendations of energy agencies in matters of grid reliability should not sway any decision on a matter of water quality that is squarely within the Water Boards’ environmental regulatory purview.

We recognize that transcendent statewide concerns to keep the lights on can be in tension with the local impacts associated with the continued operation of the Facility. The Los Angeles Water Board and City’s response, though, artificially isolates these competing concerns. Their responses presuppose that continued operation of the power

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<sup>25</sup> See, Final Staff Report, Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling, to Revise Compliance Schedules for Alamitos, Huntington Beach, Ormond Beach, and Redondo Beach Generating Stations and Diablo Canyon Nuclear Power Plant (Sept. 1, 2020); Final Staff Report, Amendment to the Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling, to Revise the Compliance Schedule for the Redondo Beach Generating Station (Oct. 19, 2021).

<sup>26</sup> OTC Policy, 1.G.

<sup>27</sup> Renee Purdy, Los Angeles Water Board Executive Officer, letter to State Water Board, June 13, 2022, (hereinafter Los Angeles Water Board Petition Response), p. 2.

<sup>28</sup> Michael W. Webb, City Attorney of the City of Redondo Beach, letter to State Water Board, June 10, 2022, p. 3.

plant for grid reliability purposes should be considered independent of the water quality impacts associated with the discharge. In fact, the water quality impacts would not occur without continued operations necessary to protect the grid.

The Los Angeles Water Board also notes a number of concerns with a TSO, including the initial overbreadth of the requested TSO constituents, lack of milestones completed since 2019, and concern with the potential for future OTC Policy amendments.<sup>29</sup> We share the Los Angeles Water Board's concerns about the breadth of the initial TSO request, and if we were asked to consider it for adoption, we would likely reject many of the requests. In this order, we only consider the more narrowly tailored TSO request. The breadth of the initial request is of no moment. Further, concerns about Petitioner having failed to achieve some milestones is best addressed through targeted, progressive enforcement as opposed to wholesale rejection of a longer time schedule based on revised statewide policy and grid reliability concerns. With respect to the Los Angeles Water Board's final concern, unfortunately, we have limited ability to prevent future grid reliability concerns that might result in future requests by SACCWIS for revisions to the OTC Policy. Instead, consistent with the OTC Policy we address concerns as they arise and as they are presented to us by the SACCWIS.

The Los Angeles Water Board correctly notes that issuance or extension of a TSO is a discretionary decision and that the Los Angeles Water Board had no mandatory duty to adopt the proposed TSO. We agree. However, having previously concluded that the OTC Policy compliance date extension for the Facility is appropriate in the circumstances, we find it fair to adopt the requested TSO for the period of the OTC Policy compliance extension. While Petitioner did not object to continued operation of the Facility, neither did it propose the OTC Policy compliance date extensions. Instead, the extension request arose from the SACCWIS, comprised of the state's energy and grid reliability experts, which based on infrastructure, supply availability, and demand considerations recommended extensions to foster grid reliability.

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<sup>29</sup> Los Angeles Water Board Petition Response, at pp. 6 -7.

As we discuss below, there is no practical treatment for temperature and DDT in the short term. Imposing MMPs for unavoidable effluent limitation violations resulting from necessary Facility operations would be inconsistent with our action to extend the OTC compliance date and the larger purposes of water quality enforcement. Adoption of a TSO serves the public interest, given the need for power generated by the Facility in order to sustain grid reliability. We emphasize that, while we find that the Los Angeles Water Board's failure to adopt a TSO in these unique circumstances was inappropriate and improper, we recognize that this is simply a matter of differences in policy perspectives.

### **B. Water Quality Concerns**

Discharges from the Facility adversely affect water quality, and the extension of Facility operations means ongoing discharges of certain pollutants, as illustrated by the range of constituents originally covered by the Los Angeles Water Board's previous TSOs for the Facility. Initially, in the fall of 2021 Petitioner sought a broad extension of these prior TSOs. As noted above, though, Petitioner later examined monitoring data and concluded that a time schedule is unnecessary for most of those constituents, leaving only DDT and temperature as likely effluent limitation violations. We focus the remainder of our consideration on the issues raised by these two constituents and the means of reducing their effects.

Petitioner does not use DDT as part of its operations. Detection of DDT in the Facility's discharge is the result of the substance being present in the source water used for cooling and the Facility does not increase the amount of DDT in its discharge. During the Los Angeles Water Board hearing, Petitioner's representative testified that existing ocean sediment contamination causes DDT in the Facility's intakes' source water.<sup>30</sup> The discharge of cooling water then recirculates the pollutant, causing or contributing to an

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<sup>30</sup> Statement at Los Angeles Water Board hearing from Mike Lyons, environmental consultant for Petitioner. (Administrative Record, p. AR-3080.)

exceedance of the applicable limitations when it is discharged through the Facility's outfalls.<sup>31</sup>

Elevated temperature does result directly from Facility operations, insofar as seawater is used for cooling and absorbs heat before it is discharged back to the receiving waters. The effluent limitations for temperature contained in the 2016 Permit were based in part on the Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California.<sup>32</sup> They are intended to protect beneficial uses and limit increases in receiving water temperature that may harm the ecosystem. Petitioner argues that the discharges have not caused exceedances of the receiving water limitations for temperature and are causing only small increases in the temperature of receiving water.<sup>33</sup>

The Los Angeles Water Board and the City argue that water quality concerns take precedence over Petitioner's interest in avoiding MMPs during the remainder of the Facility's operation. Importantly, however, the Los Angeles Water Board and the City fail to acknowledge the fact that, given Petitioner's obligation to continue to operate as

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<sup>31</sup> The US EPA established the Santa Monica Bay Total Maximum Daily Loads (TMDL) for DDTs and PCBs (polychlorinated biphenyls) on March 26, 2012. The TMDL includes waste load allocations for DDTs and PCBs for point sources, including the Facility. The 2016 Permit implements the requirements of the Santa Monica Bay DDTs and PCBs TMDL. 2016 Permit, Section III.F. Additionally, the California Office of Environmental Health Hazard Assessment has issued a fish consumption advisory for the Santa Monica Beach south of Santa Monica Pier to Seal Beach, an area that includes King Harbor: <https://oehha.ca.gov/advisories/santa-monica-beach-south-santa-monica-pier-seal-beach-pier> [as of June 22, 2022].

<sup>32</sup> State Water Board Res. No. 75-89, Adopting Amendments to the Water Quality Control Plan for Control of Temperature in the Coastal and Estuarine Waters and Enclosed Bays and Estuaries of California (Sept. 18, 1975). The 2016 Permit sets forth a receiving water limitation directing that the discharge to King Harbor "shall not cause . . . [s]urface water temperature to rise greater than 5° F above the natural temperature of the receiving waters at any time or place. At no time shall the temperature be raised above 86°F as a result of waste discharged." (Section V.B.2.)

<sup>33</sup> Mark Miller, General Manager, AES Southland, letter to State Water Board, Mar. 24, 2022, p. 16.

necessary to maintain grid reliability and, as discussed below, inability to prevent violations of the 2016 Permit's effluent limitations for temperature and DDT, the water quality impacts associated with future discharges from the Facility will occur regardless of whether we adopt a TSO.

We recognize legitimate concerns raised by the Los Angeles Water Board and local community as to the continuing water quality impacts resulting from operating the Facility. This Board's mission includes preserving, enhancing and restoring California's water resources and all beneficial uses, a mission we take seriously. The balance of competing interests weighs in favor of granting a limited TSO to ensure that power generators serving critical electrical needs are not unduly penalized for operating when called upon.

### **C. Ability to Treat the Discharge**

Petitioner supports its request for extension of the TSO by emphasizing that its plan to come into compliance with the 2016 Permit's effluent limitations consists of ending the discharge by retiring the Facility. As such, any other plans to treat the discharge to comply with the 2016 Permit's temperature and DDT effluent limitations would involve having developed "a second and entirely different plan over the past 12 months to meet the final effluent limits," given that the Los Angeles Water Board had in 2020 approved a TSO premised upon retirement as the approach to meeting the final limitations.<sup>34</sup> Los Angeles Water Board staff testified on December 9, 2021, that building a treatment system was not practical because of the sheer volume of cooling water discharged by the Facility.<sup>35</sup>

The Los Angeles Water Board in its response to the petition describes previous discussions and efforts to identify methods of decreasing the effects of the discharge,

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<sup>34</sup> Petition for Review and Request for Abeyance, AES Redondo Beach, LLC, Jan. 6, 2022, p. 7.

<sup>35</sup> Statement at Los Angeles Water Board hearing from Thomas Siebels, Los Angeles Water Board staff. Administrative Record, p. AR-2102.

including some investments and operational changes in 2022 to improve cooling water system performance and slightly reduce the temperature of the effluent, but has identified no further methods of treating the discharge.<sup>36</sup> Petitioner contends that the Los Angeles Water Board’s denial of the extension in 2021 one year later was thus “illogical and wholly impractical,” noting that grid reliability needs are the only thing that has changed.<sup>37</sup>

#### **D. Abatement of the Discharge**

While we do not support the assessment of MMPs for exceedances resulting solely from necessary continued operation of the Facility in this unique circumstance, we note that Water Code section 13304 authorizes us to issue an order to abate the effects of a waste discharge taking place in violation of any waste discharge requirement. Specifically, “[a] person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement . . . shall, upon order of the regional board . . . abate the effects of the waste . . . .”<sup>38</sup> We find it appropriate to use that authority to require Petitioner to abate the effects of DDT and temperature exceedances expected to result from its discharges to receiving waters, as discussed below. Such an order does not constitute a penalty for continuing to operate in service of grid reliability, but rather serves to mitigate the effects of the exceedances.

In a May 12, 2022 letter determining the petition complete and soliciting responses, State Water Board staff requested that Petitioner and the Los Angeles Water Board each “provide a prediction of the expected number and severity of violations of the DDT and temperature effluent limitations in Order R4-2016-0222 during 2022 and 2023, assuming

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<sup>36</sup> Los Angeles Water Board, Petition Response, June 13, 2022, p. 9.

<sup>37</sup> *Id.*

<sup>38</sup> Water Code section 13304, subdivision (a), also authorizes the State Water Board to issue Cleanup and Abatement Orders: “A cleanup and abatement order issued by the state board or a regional board may require the provision of, or payment for, uninterrupted replacement water service . . . .”

that Facility operations are similar to those during 2019-2021.”<sup>39</sup> In response, Petitioner predicted approximately four annual exceedances of the 2016 Permit’s DDT effluent limitation in 2022 and 2023, but did not attempt to predict the severity of such exceedances.<sup>40</sup> Petitioner predicted exceedances of the 2016 Permit’s temperature effluent limitation approximately fifteen days annually in 2022 and 2023, and identified a maximum historic instantaneous discharge temperature of 99°F.<sup>41</sup> The Los Angeles Water Board also predicted approximately four annual exceedances for DDT, but predicted a slightly higher number of temperature exceedances, at approximately nineteen annually.

State Water Board staff’s May 12, 2022 letter also sought proposals for Petitioner to offset or abate the effects of discharges of DDT and elevated temperature water. In its response, Petitioner points to mitigation payments included as part of the OTC Policy provisions as well as a voluntary benefits package the company previously proposed to undertake.<sup>42</sup> Petitioner developed the voluntary environmental benefits program during the pendency of the second OTC Policy compliance date extension for the Facility; it involves committing \$1.5 million in grants for local wetlands restoration and for new social impact programs in the Southern California region.<sup>43</sup> However, these voluntary

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<sup>39</sup> Marleigh Wood, State Water Board Office of Chief Counsel, letter to Mark Miller, AES Redondo, LLC, and Maureen F. Gorsen, Sidley Austin LLP, May 12, 2022.

<sup>40</sup> Mark Miller, General Manager, AES Southland, letter to Marleigh Wood, State Water Board, June 2, 2022, p. 1.

<sup>41</sup> *Id.* p. 2.

<sup>42</sup> See, OTC Policy Section 2.C.3. The Policy requires annual interim mitigation payments beginning in 2015 and continuing until compliance is achieved, intended to offset impingement and entrainment impacts. State Water Board Resolution No. 2015-0057 delegates authority to the Executive Director to approve mitigation measures and provides a payment calculation method developed by an expert review panel and based on the cost of restoring habitat that replaces the production of marine organisms killed through entrainment as well as the indirect economic cost of fish damaged as they are trapped against screens.

<sup>43</sup> See, State Water Board Resolution No. 2021-0048, Finding 28.

environmental payments do not address temperature or DDT discharge impacts to King Harbor but appear more concerned with effects resulting from the seawater intake and otherwise aimed at issues such as science education and coastal access.

The Los Angeles Water Board offers suggestions for monetary contributions to organizations or efforts that would aid in abating the effects of the two constituents. First, with respect to DDT, the Los Angeles Water Board identifies funding an existing outreach organization aimed at educating local anglers on the dangers of consuming contaminated fish caught along the shoreline in the area.<sup>44</sup> For temperature-related effects, the Los Angeles Water Board suggests funding ongoing giant kelp reforestation efforts, helping to correct ecological imbalance caused by climate change.<sup>45</sup>

Funding provided to organizations such as those identified by the Los Angeles Water Board will aid in abating the adverse water quality effects associated with continued discharges from the Facility. Estimates of the likely number of exceedances may be used together with dollar amounts that otherwise would have been required as a penalty for each such exceedance, payable annually and in advance. Based on the estimates that were submitted by Petitioner and the Los Angeles Water Board, we will use a conservative number of likely annual 2016 Permit effluent limitation exceedances: four for DDT and fifteen for temperature. We use the same payment per exceedance otherwise required absent the TSO, three thousand dollars. Therefore, annual payments

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<sup>44</sup> The Los Angeles Water Board Petition Response, at page 9, specifically identifies the Angler Outreach Program/Fish Contamination Education Collaborative (FCEC), which includes outreach to anglers that fish along piers and along the shoreline of Santa Monica Bay, including Redondo Pier adjacent to King Harbor. The FCEC is the public outreach and education component of the United States Environmental Protection Agency's (USEPA) program to protect the most vulnerable populations from the health effects of consuming contaminated fish related to the Palos Verdes Shelf Superfund Site. Website available at: <http://pvsfish.org> [as of June 27, 2022].

<sup>45</sup> The Los Angeles Water Board identifies the Bay Foundation's Kelp Forest Restoration Project in order to help control the density of purple sea urchins, which can decimate a kelp forest. Petition Response, p. 9. Website available at: <http://santamonibay.org/what-we-do/projects/kelp-forest-restoration-project/> [as of June 27, 2022].

to abate the discharge total \$12,000 for DDT and \$45,000 for elevated temperature. In accordance with our authority under Water Code section 13304, we order Petitioner to pay these amounts to the organizations identified by the Los Angeles Water Board for the specified purposes, or to similar organizations, as set forth more fully below.

### **III. CONCLUSIONS**

1. Petitioner is not able to consistently comply with effluent limitations for temperature and DDT contained in Order R4-2016-0222 as amended by Order R4-2016-0222-A01. Both effluent limitations were new, more stringent regulatory requirements that became applicable to Petitioner in 2016, and new or modified control measures could not be designed, installed or put into operation within the applicable period.

2. In accordance with Water Code section 13385, subdivision (j)(3)(C)(ii), Petitioner is making diligent progress toward bringing the waste discharge into compliance with the effluent limitations. Specifically, Petitioner has made diligent progress towards compliance with the temperature and DDT effluent limitations because it has been steadily implementing actions associated with Track 1 compliance with the OTC Policy, including by permanently shutting down Unit 7 on September 30, 2019. Additional time is necessary to comply with the effluent limitations due to system-wide grid-reliability issues that require continued operation of Units 5, 6, and 8, as set forth in the amendment to the OTC Policy that was adopted on October 19, 2021, which extended the final compliance date for Petitioner by two years to December 31, 2023. Under these conditions, the State Water Board, following a public hearing and notice and comment period, may adopt the TSO for these effluent limitations in accordance with the requirements set forth in Water Code section 13385, subdivision (j)(3)(C)(ii)(II).

3. A TSO is appropriate in these circumstances to allow time for Petitioner to implement necessary control measures that will bring the Facility into compliance with the 2016 Permit's effluent limitations for DDT at Discharge Point 001; and for temperature and DDT at Discharge Point 002.

4. The exemptions from mandatory minimum penalties established by this TSO are in the public interest given the Facility is a generating station utilized to supply

power to the power grid, this TSO is for a limited period of time, and the discharge is required to be in compliance with the other limitations in Order R4-2016-0222 as amended by Order R4-2016-0222-A01 and the interim effluent limitations contained in this TSO.

5. Pursuant to Water Code section 13385, subdivision (j)(3), full compliance with the requirements of this TSO exempts Petitioner from mandatory minimum penalties only for violations of the effluent limitations for DDT for the discharge to the Pacific Ocean at Discharge Point 001 and for temperature and DDT for the discharge to King Harbor at Discharge Point 002, contained in Order R4-2016-0222 as amended by Order R4-2016-0222-A01.

#### **IV. ORDER**

IT IS HEREBY ORDERED THAT, for the reasons discussed above, and pursuant to Water Code section 13300, AES Redondo Beach, LLC, as operator of the Redondo Beach Generating Station, shall comply with the requirements listed below to ensure its discharges comply with the effluent limitations for DDT for the discharge to the Pacific Ocean at Discharge Point 001 and for temperature and DDT for the discharge to King Harbor at Discharge Point 002 contained in Order R4-2016-0222 as amended by Order R4-2016-0222-A01:

1. Comply immediately with the following interim effluent limitation at Discharge Point 001, which shall be deemed effective until December 31, 2023: “The discharge shall not exceed a 30-day average of 2.5 µg/L DDT. DDT shall mean the sum of: 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'- DDE, 4,4'-DDD and 2,4'-DDD.”

2. Comply immediately with the following interim effluent limitations at Discharge Point 002, which shall be deemed effective until December 31, 2023: “The discharge shall not exceed an instantaneous maximum temperature of 102°F from May to October. The discharge shall not exceed a 30-day average of 2.5 µg/L DDT. DDT shall mean the sum of: 4,4'-DDT, 2,4'-DDT, 4,4'-DDE, 2,4'- DDE, 4,4'-DDD and 2,4'-DDD.”

3. Achieve full compliance with the effluent limitations for DDT for the discharge to the Pacific Ocean at Discharge Point 001, and for temperature and DDT for the discharge to King Harbor at Discharge Point 002, contained in Order R4-2016-0222 as amended by Order R4-2016-0222-A01 as soon as possible, but no later than December 31, 2023.

4. Comply with the schedule as stipulated below:

a. Eliminate the discharge of OTC water and low volume wastewater through Discharge Point 001 by permanently shutting down Units 5 and 6 no later than December 31, 2023.

b. Eliminate the discharge of OTC water through Discharge Point 002 by permanently shutting down Unit 8 no later than December 31, 2023.

5. The State Water Board may reopen this TSO at its discretion or at the request of the Permittee, if warranted.

6. This TSO becomes effective on August 2, 2022 and expires on December 31, 2023.

IT IS FURTHER ORDERED THAT, for the reasons discussed above, and pursuant to Water Code section 13304, AES Redondo Beach, LLC, as operator of the Redondo Beach Generating Station, shall make annual payments as described below to abate the effects of the predicted exceedances of the DDT and temperature effluent limitations set forth in Order R4-2016-0222 as amended by Order R4-2016-0222-A01. For the predicted DDT exceedances, AES Redondo Beach, LLC, shall make annual payments of \$12,000 to the Fish Contamination Education Collaborative to help fund outreach efforts educating local anglers on the dangers of consuming fish contaminated by DDT and other constituents. For the predicted temperature exceedances, AES Redondo Beach, LLC, shall make annual payments of \$45,000 to the Bay Foundation to help fund its Kelp Forest Restoration Project within Santa Monica Bay. In the alternative, AES Redondo may, within twenty days of the date of this order, propose to fulfill these requirements by

making payments to similar projects or organizations that will use the funding to abate the effects of the predicted exceedances, subject to approval by the State Water Board's Chief Deputy Director. The required payments for 2022 are due within 30 days of the date of this order. The required payments for 2023 are due no later than June 30, 2023.