

FINAL DETERMINATION TO APPROVE MITIGATION MEASURES FOR THE WATER QUALITY CONTROL POLICY ON THE USE OF COASTAL AND ESTUARINE WATERS FOR POWER PLANT COOLING (ONCE-THROUGH COOLING POLICY):

ENCINA POWER STATION

Interim mitigation requirements of the Once-Through Cooling Policy

The Once-Through Cooling (OTC) Policy requires owners or operators of existing power plants to implement measures to mitigate interim impingement and entrainment impacts resulting from their cooling water intake structures. The interim mitigation period commenced on October 1, 2015 and continues up to and until owners or operators achieve their final compliance deadlines as outlined in the OTC Policy. Section 2.C(3) of the Policy provides three options for demonstrating compliance with interim mitigation:

- (a) Demonstrate to the satisfaction of the State Water Resources Control Board (State Water Board) that the owner or operator is compensating for the interim impingement and entrainment impacts through existing mitigation efforts, including any projects that are required by state or federal permits as of October 1, 2010.
- (b) Demonstrate to the State Water Board's satisfaction that the interim impacts are compensated for by the owner or operator providing funding to the California Coastal Conservancy which will work with the California Ocean Protection Council to fund an appropriate mitigation project.
- (c) Develop and implement a mitigation project for the facility, approved by the State Water Board, which will compensate for the interim impingement and entrainment impacts.

Encina Power Station and co-located operations

Encina Power Station (EPS) operates under Order No. R9-2006-0043, [National Pollutant Discharge Elimination System (NPDES) No. CA0001350], and is permitted to withdraw OTC water from Agua Hedionda Lagoon at a maximum rate of 857.3 million gallons per day (MGD). EPS is scheduled to comply with the OTC Policy on or before December 31, 2017. EPS is also the host site and shares the OTC intake and discharge infrastructure with the co-located Poseidon Resources Corporation's (Poseidon) Carlsbad Desalination Project (CDP). CDP requires steady and sustained flows of 304 MGD and uses EPS's cooling water discharge as its source water whenever the power plant is operating. However, when EPS is not producing enough cooling water discharge, it operates the OTC circulating water pumps exclusively to supply source water for CDP.

Cabrillo Power I LLC (Cabrillo), the owner of EPS and wholly owned subsidiary of NRG Energy, Inc., has requested to comply through interim mitigation options (b) and (c). Specifically, Cabrillo requested that (1) the first 304 MGD of OTC flow be satisfied by Poseidon's mitigation project for CDP and (2) any water flow required solely for CDP would not be defined as OTC flow and, therefore, not subject to the OTC Policy's interim mitigation requirements.

Poseidon's Mitigation for CDP

Pursuant to Order No. R9-2006-0065 of (NPDES No. CA0109223) Poseidon submitted a Flow, Entrainment, and Impingement Minimization Plan (Minimization Plan) for CDP on March 27, 2009. (See, Order No. R9-2006-0065, Section VI.C.2.e.) The March 27, 2009, Minimization Plan was conditionally approved by the San Diego Regional Water Quality Control Board (Regional Water Board) on May 13, 2009, through the adoption of Order No. R9-2009-0038. The Minimization Plan was prepared in accordance with the requirements of Water Code section 13142.5(b) in order to identify the best available site, design, technology, and mitigation measures feasible to be used by Poseidon to minimize the intake and mortality of all forms of marine life resulting from CDP operations when the CDP is co-located with EPS, but the CDP intake requirements exceed the volume of water being discharged by the EPS and EPS operates its seawater intake and outfall for the benefit of the CDP. The Minimization Plan included a mitigation component consisting of a proposed phased implementation of wetland restoration with an agreed-upon productivity standard, although Order No. R9-2009-0038 notes disagreement as to certain data points regarding impingement at Finding 45.

The Regional Water Board found that operation of CDP in conjunction with EPS, using the EPS cooling water as source water, would not trigger the need for additional technology or mitigation to minimize impacts to marine life. (See, Order No. R9-2006-0065, Attachment F, Section VII.B.4, at p. F-52.) The Regional Water Board noted evidence that “. . . nearly 98 percent of the larvae entrained by the EPS are dead at the point of the desalination plant intake. As a result, a *de minimis* of organisms remain viable which would potentially be lost due to the incremental entrainment effect of the CDP operation.” *Id.* The Regional Water Board directed implementation of the Minimization Plan in instances when CDP's intake requirements exceed the volume of water being discharged by EPS, in order to comply with the requirements of Water Code section 13142.5(b).

An environmental group challenged approval of the NPDES permit and accompanying Minimization Plan in *Surfrider v. California Regional Water Quality Control Board* (2012) 211 Cal.App.4th 557, contending that the Regional Board had failed to comply with the requirements of section 13142.5(b). Surfrider Foundation argued that Poseidon had relied solely on mitigation measures to minimize intake and mortality of marine life, contrary to the requirements of the statute. In rejecting these contentions and upholding the Regional Water Board's determination that Poseidon's plan complied with section 13142.5(b), the appellate court found that the Minimization Plan, covering only co-located operations, appropriately used substantive site, design and technology measures to minimize intake and mortality of marine life. These measures included co-location, which allowed use of the EPS cooling water discharge “instead of taking in new seawater, which has the potential to harm marine life by impingement and entrainment.” 211 Cal.App.4th at 571. The Court went on to note:

[W]hen the EPS is supplying all of the seawater needed for desalination operations, operation of the desalination facility will not require the intake of seawater and thus, as the Minimization Plan explains, any marine life mortality caused by the operation of the desalination facility . . . is “de minimus.” . . . [T]he Regional Board directed the preparation of the Minimization Plan to

specifically address only those instances in which the desalination facility's intake requirements exceed the volume of water being discharged by the EPS. . . .

211 Cal.App.4th at 572, fn 9. Thus, it is clear that the Regional Board's approval of the Poseidon Minimization Plan, and the Court's subsequent rejection of Surfrider's claims, rely on the premise that Poseidon is not responsible for impingement and entrainment resulting from the intake water obtained from the EPS cooling water discharge. The Minimization Plan, including proposed mitigation, was expressly intended to address those instances where CDP's intake requirements exceed the volume of water being discharged by EPS, and not intended to cover EPS' operations or intake.

State Water Board's final determination for EPS

Cabrillo's request to apply Poseidon's planned mitigation efforts toward compliance with the OTC Policy's interim mitigation requirements is unsupported. The State Water Board has not identified evidence or findings to indicate that the Regional Water Board approval of Poseidon's Minimization Plan was intended to mitigate for the impacts of impingement and entrainment of marine life associated with cooling water intakes required for EPS's operations. Furthermore, Poseidon has yet to implement the mitigation portion of the Minimization Plan. Therefore, Cabrillo must identify a proposed plan to mitigate the interim impingement and entrainment impacts resulting from intake of cooling water required for EPS operations, including under conditions of co-located operation with CDP.

However, the State Water Board agrees and recognizes that any intake flow required solely for CDP is not defined as OTC flow and is not subject to the OTC Policy's interim mitigation requirements. The CDP is not subject to 316(b) requirements and Poseidon's Minimization Plan is intended to mitigate for the impacts of impingement and entrainment when CDP's intake requirements exceed the volume of water being discharged by EPS.