CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION

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TENTATIVE ORDER NO. R9-2009-0038
AMENDING
ORDER NO. R9-2006-0065 (NPDES NO. CA0109223)
WASTE DISCHARGE REQUIREMENTS FOR
THE POSEIDON RESOURCES CORPORATION
CARLSBAD DESALINATION PROJECT
DISCHARGE TO THE PACIFIC OCEAN VIA
THE ENCINA POWER STATION DISCHARGE CHANNEL

The California Regional Water Quality Control Board, San Diego Region (hereinafter Regional Board), finds that:

1. On August 11, 2006, the Regional Board adopted Order No. R9-2006-0065 (NPDES No. CA0109223) (Order No. R9-2006-0065) establishing waste discharge requirements for Poseidon Resources Corporation (Poseidon) to discharge up to 57 million gallons per day (MGD) of a combined waste stream comprised of concentrated saline waste seawater and filter backwash wastewater from the Carlsbad Desalination Project (CDP) into the Pacific Ocean via the Encina Power Station (EPS) cooling water discharge channel. Intake source water from Agua Hedionda Lagoon is to be drawn in through the existing EPS intake structure. The total flow rate of source water needed to operate the CDP at full production was determined to be 304 million gallons per day, in order to produce 50 MGD (MGD). Of this source water, 107 MGD will be used for the production of 50 MGD of potable water (and 57 MDG of wastewater). The remaining 197 MGD of source water not used for production is needed as dilution water to comply with the salinity requirements of the NPDES Permit. This results in a total discharge flow rate of 254 MGD (57 MGD of wastewater and 197 MGD of dilution water).

2. Section 13142.5(b) of the California Water Code requires new or expanded coastal industrial facilities using seawater for cooling, heating, or industrial processing, to use the best available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life.

3. Section VI.C.2.e. of Order No. R9-2006-0065 requires Poseidon to submit for Regional Board approval, within 180 days of adoption, a Flow, Entrainment and Impingement Minimization Plan (Minimization Plan) that "shall assess the feasibility of site-specific plans, procedures, and practices to be implemented and/or mitigation measures to minimize the impacts to marine organisms when the CDP intake requirements exceed the volume of water being discharged by the EPS." The Order requires an approved Minimization Plan to ensure that the CDP complies with section 13142.5(b) of the Water Code when the CDP is co-located with EPS, but CDP's intake requirements exceed the volume of water being

discharged by EPS under power generation operations ("co-location operation for CDP benefit"). Co-location operation for CDP benefit can occur under conditions (1) when EPS is temporarily shut down or (2) when EPS is operating but its discharge volume is not sufficient to meet CDP's intake requirements.

4. If EPS permanently ceases operations and the Discharger proposes to independently operate the existing EPS seawater intake and outfall for the benefit of the CDP ("stand-alone operation"), it will be necessary to evaluate whether, under those conditions, the CDP complies with the requirements of Water Code section 13142.5(b). Additional review will be necessary in part because under stand-alone operations, the Discharger will have more flexibility in how it operates the intake structure and outfall and additional and/or better design and technology features may be feasible.

5. On February 13, 2007, the Discharger submitted a draft Minimization Plan dated February 12, 2007, intended to comply with Order R9-2006-0065. On June 29, 2007, in response to Regional Board and interested persons' comments, the Discharger submitted a revised Minimization Plan, dated June 1, 2007. The Regional Board reviewed the revised Minimization Plan, and in a letter dated February 19, 2008, informed the Discharger that the revised Minimization Plan was incomplete and included a detailed listing of items that needed to be addressed before the Regional Board could approve the revised Minimization Plan.

6. On March 7, 2008, the Discharger submitted an updated version of the revised Minimization Plan, dated March 6, 2008.

7. On April 9, 2008, in a public meeting, the Regional Board adopted Resolution No. R9-2008-0039. The Regional Board determined that the revised Minimization Plan did not satisfy all of the requirements in Section VI.C.2.e. of Order No. R9-2006-0065, but conditionally approved the Plan subject to the conditions (1) that within six months, the Discharger submit an amended Minimization Plan that includes a specific proposal for mitigation of the impacts, by impingement and entrainment upon marine organisms resulting from the intake of seawater from Agua Hedionda Lagoon and (2) that the amended Plan address the items outlined in the February 19, 2008 letter to Poseidon and the following additional concerns:

    a) Identification of impacts from impingement and entrainment;
    b) Adequate monitoring data to determine the impacts from impingement and entrainment;
    c) Coordination among participating agencies for the amendment of the Plan as required by Section 13225 of the California Water Code;
    d) Adequacy of mitigation; and
    e) Commitment to fully implement the amendment to the Plan.

8. On November 18, 2008, the Regional Board received an amendment to the March 6, 2008, Minimization Plan. The amendment was titled the Marine Life Mitigation Plan and was dated November 14, 2008 (MLMP). The MLMP was intended to satisfy the conditions in Resolution No. R9-2008-0039. In a letter dated December 2, 2008, the Executive Officer informed the Discharger that the amended Plan did not satisfy the requirements established in Resolution No. R9-2008-0039 since it did not propose a specific mitigation site or specific proposal for mitigation at an identified site. The amendment to the Plan also did not fully address the issues raised in the Regional Board's February 19, 2008 letter, and was submitted past the due date of October 6, 2008. On December 9, 2008, the Discharger submitted a response to the December 2, 2008 letter disagreeing and asserting that the amendment to the Plan and previous submittals satisfied the Regional Board's conditions set forth in Resolution No. R9-2008-0039.

9. On February 11, 2009, in a public meeting, the Regional Board was scheduled to consider whether the MLMP satisfied the conditions established in Resolution No. R9-2008-0039 or whether failure to satisfy the conditions rendered the Resolution inoperative by its own terms. At the commencement of the meeting, the Executive Officer identified a list of outstanding issues concerning the March 6, 2008 Minimization Plan, as supplemented by the MLMP. The outstanding issues were identified as follows: "(1) Placing Regional Water Board and its Executive Officer on equal footing, including funding, with Coastal Commission and its Executive Director, in the MLMP, while minimizing redundancies (e.g., only one Scientific Advisory Panel). Details of dispute resolution process to be worked out; (2) Reducing the number of sites to five, in consultation with the Coastal Commission, with the existing proviso that other sites within the Regional Board boundaries could be added.; (3) Poseidon to provide the flow-proportioned calculations for Poseidon's impacts due to impingement, to help support the Board's determination that these impacts are *de minimis*.; and (4) Poseidon to provide a consolidated set of all requirements imposed to date by the various agencies."

10. The Regional Board heard public comment at the February 11, 2009 hearing, but with the concurrence of the Discharger, continued the matter to its April 8, 2009 meeting. The Regional Board directed staff to work with the Discharger to expeditiously address the list of the outstanding issues identified by the Executive Officer and further directed staff to prepare for Regional Board consideration a resolution or order approving the Flow, Entrainment, and Impingement Minimization Plan required by Order No. R9-2006-0065.

11. Following the February 11, 2009 meeting, Regional Board staff and the Discharger met on numerous occasions to address the outstanding issues. On March 9, 2009, the Discharger submitted a further revised Minimization Plan, including the MLMP, for Regional Board consideration. This version of the Minimization Plan is referred to herein as the March 9, 2009 Minimization Plan.

12. The Regional Board reviewed the March 9, 2009 Minimization Plan to determine whether its implementation will result in the "use [of] the best available site, design, technology, and

mitigation measures feasible to minimize the intake and mortality of all forms of marine life" under co-location operation for CDP benefit.

SITE

13. Chapter 2 of the March 9, 2009 Minimization Plan addresses identification of the best available site feasible for the CDP to minimize the intake and mortality of marine life under conditions of co-location operation for CDP benefit.

14. The Discharger evaluated three sites in the City of Carlsbad that would accommodate a large desalination project. These sites include (1) other locations on the EPS property, (2) the Encina Water Pollution Control Facility, and (3) the Maerkle Reservoir.

15. The Discharger concluded that all three alternatives were found to be infeasible for the following reasons:

    (1) Other locations within the Encina Power Station property: Alternative sites within the EPS property were infeasible because the power plant owner has reserved the remaining portion of the site to accommodate future power plant modifications, upgrades or construction of new power plant facilities

    (2) Encina Water Pollution Control Facility: This site could only accommodate a desalination plant with a 10 MGD production capacity, due to the outfall constraints. Use of this site would also require the construction of an intake pipeline to convey source water from the power plant cooling canal; and

    (3) Maerkle Reservoir: The public rights-of-way between the reservoir and the Pacific Ocean do not have sufficient space to accommodate an intake pipeline and concentrate line. Use of this site would also require the pumping of over 100 MGD of seawater to an elevation of 531 feet (compared to 70 feet at the proposed site) for processing. This area has also been zoned as "Open Space."

16. The Project EIR, certified by the City of Carlsbad on June 13, 2006, evaluated only alternative 2 above, and concluded the Encina Water Pollution Control Facility site would not be as effective as the proposed location in satisfying the objectives of the project. The EIR did not evaluate other locations within the EPS since other locations within the EPS were determined to be substantially the same as the proposed site.

17. The Discharger concludes that the proposed location for the CDP at the EPS (as previously approved by the Regional Board in NPDES Permit No. R9-2006-0065) is the best available site for the Project because there are no feasible and less environmentally damaging alternative locations.

18. The EPS site is the only site in reasonable proximity to the existing seawater intake and outfall, and to key delivery points of the water distribution system of the City of Carlsbad, the largest user of proposed desalinated water anticipated by the Discharger. The use of existing intake and discharge facilities at the EPS site avoids construction of a major new intake system and discharge facilities.

19. Under the scenario proposed in the Discharger's Report of Waste Discharge for Order No. R9-2006-0065 as described in Section II.B. of that Order, there are no better alternative and feasible sites available for the CDP.

DESIGN

20. Chapter 3 of the March 9, 2009 Minimization Plan addresses identification of the best available design feasible to minimize the intake and mortality of marine life under co-location operation for CDP benefit.

21. A key feature of the proposed design is the direct connection of the desalination plant intake and discharge facilities to the discharge canal of the power generation plant. This approach allows the CDP to use the power plant cooling water as both source water for the seawater desalination plant and as a blending water to reduce the salinity of the desalination plant concentrate prior to the discharge to the ocean. Under the conditions of co-location with the EPS, however, Poseidon has little control over the intake structure.

22. When EPS is producing power and is discharging 304 MGD or more of seawater for once-through cooling, the March 9, 2009 Minimization Plan concludes that the proposed desalination plant operation would cause a *de minimis* increase in entrainment and impingement of marine organisms. Under conditions of co-location operation for CDP benefit, the Discharger must comply with Water Code section 13142.5(b) and use best available design feasible to minimize incremental increases in intake and mortality of marine life for operation under these conditions. Based on flow data submitted by the Discharger, the EPS would have provided 89% of the CDP required flow in 2008 indicating that the CDP would have been responsible for minimizing intake and mortality of the additional 11% increment in impacts from EPS operations conducted for the benefit of CDP. The March 9, 2009 Minimization Plan concludes that under this condition, direct use of the EPS discharge and variable frequency drives on the desalination plant intake pumps will result in a substantial reduction in intake and mortality of marine life.

23. The March 9, 2009 Minimization Plan also concludes that additional design features will be employed to minimize intake and mortality of marine life when EPS is temporarily shut down. The CDP must comply with the best available design requirement in Water Code section 13142.5(b) when EPS is operating for the benefit of CDP (whether EPS is temporarily shut down or not otherwise discharging sufficient volume of water to meet CDP's operational needs). Features that will be incorporated in the desalination plant design to reduce impingement, entrainment, and flow collection when EPS is temporarily

shut down include operation of a modified (EPS) pump configuration to reduce both inlet (bar racks) and fine screen velocity, and ambient temperature processing. While the percentage of time EPS is temporarily shut down has not been predicted and the Discharger has not quantified the expected reduction in impingement and entrainment during operation under these conditions, it is reasonable to conclude that reductions in impingement and entrainment will occur when CDP implements these features.

24. Available information shows that under the conditions of co-location operation for CDP's benefit, the Discharger has little control over the intake structure and the corresponding intake pumps. Under the conditions of co-location operation, the existing intake meets the best available design criteria.

25. The Discharger indicates that the design features it will use under limited co-location operations would also serve as best available design under stand-alone conditions. As indicated above, the Regional Board is not considering the adequacy of design alternatives for stand-alone operating conditions at this time. Once EPS permanently shuts down and the CDP is operated as on stand-alone basis, the Discharger will have more flexibility in design implementation. It will be appropriate to undertake additional evaluation under CWC section 13142.5 at that time to determine whether any additional and/or superior design features are feasible for CDP stand-alone operations.

TECHNOLOGY

26. Chapter 4 of the March 9, 2009 Minimization Plan addresses identification of the best available technology feasible to minimize the intake and mortality of marine life under co-location operation for the CDP's benefit.

27. Because CDP will be co-located with the EPS, technological modifications to the existing intake channel to minimize the intake and mortality of marine life must be compatible with both EPS's and CDP's operations. In addition, the Amendment of Lease PRC 8727.1 [State Lands Commission lease with Cabrillo Power LLC I (EPS operator)] to authorize CDP's use of the intake and outfall recognized that entrainment and impingement minimization measures cannot interfere with, or interrupt ongoing power plant operations.

28. The Discharger analyzed and investigated a number of alternative seawater intake, screening, and treatment technologies prior to selecting the desalination plant intake, screening, and seawater treatment technologies planned for the CDP. The discharger concluded that when economic, environmental and technological factors are taken into account, the power plant intake screening alternatives are not capable of being accomplished in a successful manner within a reasonable period of time.

29. The Discharger analyzed the following intake alternatives: (1) Subsurface intake (vertical and horizontal beach wells, slant wells, and infiltration galleries); (2) new open ocean

intake; (3) Modifications to the existing power plant intake system; and (4) Installation of variable frequency drives (VFDs) on seawater intake pumps.

30. The Discharger compared screening technologies to identify the best available technology feasible including: (1) Fish net, acoustic and air bubble barriers upstream of the existing intake inlet mouth; (2) New screening technologies to replace the existing inlet screens (bar racks); and (3) fine vertical traveling screens.

31. The Discharger concluded that implementation of the alternatives associated with the modification of the existing power plant intake and screening facilities were infeasible because they would interfere with, or interrupt, power plant scheduled operations. The Discharger also concluded that taking into account economic, environmental and technological factors, the power plant intake screening alternatives are not capable of being accomplished in a successful manner within a reasonable period of time.

32. The Discharger identified intake technologies it will employ to reduce intake and mortality of marine organisms during temporary or permanent shutdown of the EPS. The CDP intake pump station design will incorporate variable frequency drives to reduce the total intake flow for the desalination facility to no more than that needed at any given time, thereby minimizing the entrainment of marine organisms.

33. Under the conditions of co-location operations for CDP's benefit, the Discharger has little control over the intake structure and little flexibility in implementing different technologies. Under these circumstances, the Discharger has identified the best technologies feasible to minimize the intake and mortality of marine life at this time. Because different and/or better technologies may be feasible under stand-alone operations, the Regional Board will require evaluation of CDP's compliance with Water Code section 13142.5(b) under those conditions.

MITIGATION

34. Chapter 6 of the March 9, 2009 Minimization Plan describes mitigation measures associated with the CDP, incorporates the November 14, 2008 Marine Life Mitigation Plan previously submitted by the Discharger, and addresses identification of best mitigation feasible to minimize intake and mortality of marine life under conditions of co-location operation for CDP benefit. By attachment, Poseidon includes baseline studies of the existing marine system in the area that could be affected by the facility.

35. The MLMP sets forth a plan for mitigation and monitoring for impacts due to entrainment from the CDP as means of complying with Water Code section 13142.5(b). It was developed by the Discharger in consultation with multiple resource agencies including the Regional Board, and was approved by the California Coastal Commission (Commission) on November 21, 2008. The MLMP was written for stand-alone operation, and proposes phased implementation of up to 55.4 acres of wetland mitigation within the Southern

California Bight. Phase I requires the creation of 37 acres, and Phase II requires an additional 18.4 acres which the Discharger may propose to eliminate or reduce if it proposes alternative mitigation, such as new entrainment reduction technology or mitigation credits for dredging.

36. The MLMP proposes mitigation to be selected from among 11 potential sites in southern California. These sites are Tijuana Estuary, San Dieguito River Valley, Agua Hedionda Lagoon, San Elijo Lagoon, Buena Vista Lagoon, Huntington Beach Wetland, Anaheim Bay, Santa Ana River, Los Cerritos Wetland, Ballona Wetland, and Ormond Beach. Additional sites may be incorporated if appropriate. The Minimization Plan clarifies that preference will be given to mitigation in the San Diego Region, to the extent feasible.

37. Within 9 months of receiving the Coastal Development Permit from the Commission, the Discharger must submit to the Commission, and the Regional Board, a list of the selected mitigation site or sites, and corresponding preliminary restoration plans, for review and agency approval. Six months following the Regional Board's and Commission's approval of the selected sites and proposed restoration, pending necessary permits, the Discharger must begin wetland construction. The Discharger must submit similar plans for Phase II implementation, if Phase II implementation is required, within 5 years of receiving the Coastal Development Permit for Phase I implementation.

38. The MLMP also contains mitigation monitoring requirements, and criteria for performance standards similar to those required of Southern California Edison's mitigation for SONGS at San Dieguito lagoon. The MLMP also provides for the oversight of such monitoring by a scientific advisory panel, and commits to public availability of monitoring results.

39. The California Coastal Commission, through its expert, concluded that 55.4 acres are required for stand-alone entrainment mitigation (with an 80% confidence interval). The Commission did not consider impingement impacts because the data before it assumed *de minimis* impingement impacts. The March 9, 2009 Minimization Plan presents impingement losses from CDP's projected operation at levels higher than were presented to the Coastal Commission and states that, in addition to mitigating for entrainment losses, the MLMP also mitigates for the CDP's newly-identified projected impingement.

40. The Discharger concludes that, assuming that impingement impacts are proportional to intake flow volumes, the projected CDP impingement impacts to fishes under stand-alone operation would be approximately 1,715.5 kg/year. The discharger concludes that the 37 acres to be constructed in Phase I are expected to yield approximately 1,400 kg/year of fish biomass. If the additional 18.4 acres of Phase II are implemented, they would provide an additional 696 kg/year, for a total of 2,096 kg/year. The Discharger concludes that restoration of 45.3 acres would fully offset CDP's projected impingement at 304 MGD of flow.

41. Beyond the use of the proposed impingement minimization technology (i.e. use of modified pump configuration when EPS is temporarily shut down and the reduction in flows when EPS is operating at less than 304 MGD intake), the discharger is not proposing additional mitigation for the newly-identified impacts from impingement at this time.

GENERAL

42. This Order amends Order No. R9-2006-0065 to require the Discharger to implement and comply with the March 9, 2009 Minimization Plan under co-location operations to benefit the CDP.

43. Implementation of the March 9, 2009 Minimization Plan will ensure that the CDP is in compliance with Water Code section 13142.5(b) under co-location operations to benefit the CDP.

44. Implementation of the March 9, 2009 Minimization Plan is not required by the federal Clean Water Act and does not represent an effluent standard or limitation within the meaning of section 1365 of the federal Clean Water Act [Title 33, Federal Water Pollution Control Act, section 505]. Failure to implement and comply with the Minimization Plan is not a violation subject to mandatory minimum penalties under section 13385, subdivision (h) or subdivision (i) of the Water Code, because it is not an "effluent limitation" as defined by Water Code section 13385.1, subdivision (c).

45. EPS's operations are regulated in part by Regional Board Order No. R9-2006-0043 (NDPES No. CA0001350), issued to Cabrillo Power I, LLC, on August 16, 2006. The Discharger's and EPS' use of the intake structure in accordance with Order No. R9-2006-0065, and the March 9, 2009 Minimization Plan during co-location operations to benefit the CDP, does not constitute "cooling water flow" as that term is used in Section V.B. of Order No. R9-2006-0043. Therefore, EPS need not comply with Section V.B, but shall continue to comply with Sections V.A and V.C. of Order No. R9-2006-0043, when operating the intake structure during co-location operations to benefit the CDP.

46. According to Section 13263(e) of the California Water Code, the Regional Board may, upon application by any affected person, or on its own motion, review and revise waste discharge requirements. Section 122.62(a) of title 40 of the Code of Federal Regulations authorizes the reopening and modification of an NPDES permit based upon new information.

47. Order No. 2006-0065 is not being reopened for any other purpose than the revisions contained herein. Except as contradicted or superseded by the findings and directives set forth in this Order, all of the previous findings and directives of Order No. R9-2006-0065 remain in full force and effect.

48. This action supersedes Resolution No. R9-2008-0039, which considered an earlier version of the March 9, 2009 Minimization Plan, in its entirety. Resolution No. R9-2008-0039 has no ongoing force or effect.

49. This action is exempt from the requirement of preparation of environmental documents under the California Environmental Quality Act [Public Resources Code, Division 13, Chapter 3, Section 21000 et seq.] in accordance with Section 13389 of the California Water Code.

50. The Regional Board has notified all known interested parties of its intent to adopt Order No. R9-2009-0038.

51. The Regional Board in a public hearing on April 8, 2009 heard and considered all comments pertaining to the adoption of Order No. R9-2009-0038.

THEREFORE, IT IS HEREBY ORDERED:

1. The March 9, 2009 Minimization Plan submitted pursuant to Provision VI.C.2.e. of Order No. R9-2006-0065 is hereby approved.

2. **Section VI.C.2.e in Order No. R9-2006-0065 is amended as follows:**

On March 9, 2009, t~~T~~he Discharger ~~shall submit~~ **submitted** a Flow, Entrainment and Impingement Minimization Plan **(March 9, 2009 Minimization Plan)** ~~within 180 days of adoption of the Order~~ **which was approved by the Regional Board on April 8, 2009**. The **approved P**lan ~~shall assess~~ **identifies the best available site, design, technology, and mitigation feasible to be used by the Discharger to minimize the intake and mortality of all forms of marine life during CDP operations** ~~the feasibility of site specific plans, procedures, and practices to be implemented and/or mitigation measures to minimize the impacts to marine organisms~~ 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 Discharger shall implement and comply with the terms of the Minimization Plan as approved by the Regional Board.** ~~The plan shall be subject to the approval of the Regional Water Board and shall be modified as directed by the Regional Water Board.~~ **In the event that the EPS permanently ceases operations, and the Discharger proposes to operate the seawater intake and outfall independently for the benefit of the CDP as a stand-alone facility, additional review to determine whether the CDP complies with Section 13142.5 (b) of the Water Code will be required.**

Table 12 in the Fact Sheet will be modified as follows:

Potential Issue	EIR Finding	EIR-Required Mitigation	Regional Board Analysis
Entrainment & Impingement	No Significant Impact. When operating in conjunction with EPS, the operation of CDP will not change EPS flows and flow velocities, nor cause additional impingement losses. Additional entrainment loss is ~ 0.01% to 0.28%. When operating independent of EPS, flow volume and velocity would be substantially reduced, meeting federal performance standards for impingement. Entrainment loss would range from 2% to 34% of that of EPS.	In the event the EPS were to permanently cease operations, and the Developer were to independently operate the existing EPS seawater intake and outfall for the benefit of the project, such independent operation will require CEQA compliance and permits to operate as required by then-applicable rules and regulations for the City and other relevant agencies.	The CDP is not subject to 316(b) regulations. To ~~e~~insure compliance with California Water Code Section 13142.5(b) requirements **when the CDP is co-located with the EPS but the CDP intake requirements exceed the volume of water being discharged by the EPS and EPS operates for the benefit of the CDP**, ~~Provision VI.C.2.e of Order No. R9-2006-0065 requires the discharger to develop a plan to minimize entrainment and impingement, obtain Regional Board approval for the plan, and implement the plan.~~ **the discharger must implement and comply with the March 9, 2009 Flow, Entrainment and Impingement Minimization Plan approved by the Regional Board on April 8, 2009. If EPS ceases operations and the Discharger proposes to operate the seawater intake structure and outfall independently for the benefit of the CDP as a stand-alone facility, the Regional Board will require reevaluation of the requirements of Water Code section 13142.5(b).**

Section VII.B.2.e in the Fact Sheet will be modified as follows:

e. Flow, Entrainment and Impingement Minimization Plan

The Discharger's Report of Waste Discharge assessed EPS cooling water flows over a 20.5-year period and concluded that historical EPS flows were sufficient to supply CDP intake flows and provide sufficient dilution water to insure that receiving water salinity is not adversely impacted. The Discharger also concluded that during temporary periods when power generation is suspended for maintenance, unheated EPS thru-flows would be adequate to supply CDP and provide sufficient dilution water to protect receiving water salinity. The Regional Water Board recognizes that future EPS flows may not follow historical trends. For this reason, **the Regional Board requires the Discharger to implement and comply with the approved** ~~it is warranted to require the Discharger to prepare a~~ Flow, Entrainment and Impingement Minimization Plan **to ensure that the requirements of section 13142.5(b) of the Water Code are complied with when CDP's intake requirements exceed the volume of water being discharged by the EPS and EPS operates for the benefit of the CDP.** ~~. The Flow Minimization, Entrainment and Impingement Minimization Plan shall be submitted within 180 days of adoption of the Order.~~

~~The plan shall assess the feasibility of site-specific plans, procedures, and practices to be implemented and/or mitigation measures to minimize the impacts to marine organisms when the CDP intake requirements exceed the volume of water being discharge by the EPS. The plan shall be subject to the approval of the Regional Water Board and shall be modified as directed by the Regional Water Board.~~

Section VII.B.4.b in the Fact Sheet will be modified as follows:

b. California Water Code Section 13142.5(b) Applicability. Water Code Section 13142.5(b) requires industrial facilities using seawater for processing to use the best available site, design, technology, and mitigation feasible to minimize **the intake and mortality of all forms of** ~~impacts to~~ marine life. The CDP is planned to operate in conjunction with the EPS by using the EPS cooling water discharge as its source water. When operating in conjunction with the power plant, the desalination plant feedwater intake would not increase the volume or the velocity of the power station cooling water intake nor would it increase the number of organisms impinged **and entrained** by the Encina Power Station cooling water intake structure. Recent studies have shown 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 potentially would be lost due to the incremental entrainment effect of the CDP operation. Due to the fact that the most frequently entrained species are very abundant in the area of the EPS intake, Agua Hedionda Lagoon and the Southern California Bight, species of direct recreational and commercial value would constitute less than 1 percent of all the organisms entrained by the EPS. As a result, the incremental entrainment effects of the CDP operation in

conjunction with the EPS would not trigger the need for additional technology or mitigation to minimize impacts to marine life.

In instances when the CDP's intake requirements exceed the volume of water being discharged by EPS, the CDP will implement the approved Flow, Entrainment and Impingement Minimization Plan to comply with the requirements of Water Code section 13142.5(b) to use the best available site, design, technology and mitigation feasible to minimize the intake and mortality of marine life.
~~However, in~~ **In** the event that the EPS were to cease operations, and the discharger were to independently operate the seawater intake and outfall for the benefit of the CDP, such independent **or stand-alone** operation will require additional **Regional Board** review **to ensure that CDP operations comply with the requirements of** ~~pursuant to~~ Water Code Section 13142.5(b) **by employing any additional and/or better design or technology features that were not feasible when EPS was in operation.** ~~The Regional Water Board review and approval of the Flow Minimization, Entrainment and Impingement Minimization Plan will address any additional review required pursuant to Water Code Section 13142.5(b).~~

I, John H. Robertus, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of a Order adopted by the California Regional Water Quality Control Board, on April 8, 2009.

TENTATIVE
JOHN H. ROBERTUS
Executive Officer