January 24, 2022

Tom Luster, Senior Environmental Scientist
California Coastal Commission
455 Market Street, Suite 300
San Francisco, California 94105

Sent via email: Tom.Luster@coastal.ca.gov

Re: Expert Reports - Entrainment and Mitigation at the Poseidon-Huntington Beach Desalination Plant

Dear Mr. Luster,

On behalf of the environmental coalition, we appreciate your consideration of the attached expert reports and their inclusion into the administrative record. Poseidon has submitted application materials asserting that entrainment and the need for mitigation are minimal for the Poseidon – Huntington Beach Project proposal. The expert reports enclosed within are evidence to be considered as part of the administrative record and demonstrate that entrainment due to the use of screened open ocean intakes results in significant and adverse impacts, that there are options available to Poseidon that could reduce entrainment and/or that additional mitigation is necessary to sufficiently address the impacts to marine life from the project.

The two enclosed expert reports commissioned by the Orange County Coastkeeper and two documents written by the Santa Ana Regional Water Quality Control board offer an independent third-party analysis of the legal, economic, and technical accuracy of Poseidon's application materials.

- **Evaluating California's Mitigation System for Entrainment from Open-water Desalination Intake Structures.** This presentation by Stratus Consulting includes the process for mitigation at CA desalination plants, a review of the ETM/APF method, and ETM/APF considerations and recommendations. The report concludes that regulators should focus on the mitigation/ compensation goals including providing incentives to reduce impingement and entrainment (I&E), and pursuing scaled compensation to address losses. The compensation required should be clear and define the nature of the I&E losses over time, define the relative benefits of different restoration actions with mitigation scaled so that benefits offset losses, and that additional restoration and monitoring should be utilized to reduce uncertainty.

- **Cumulative Impacts Analysis for Poseidon Project (2019).** This report by Dr. Christine Whitcraft reviewed materials for several proposed and ongoing projects (listed below) near the Huntington Beach Wetlands in Huntington Beach, CA with a specific focus on the impacts to the Huntington Beach Wetlands Complex (HBW) (Talbert, Brookhurst and Magnolia Marshes). Most of the impacts discussed in regards to these three properties would also impact the fourth HBW-associated property, Newland Marsh.

    1) AES Demo and Re-Power
    2) Ascon Landfill Remediation
    3) Magnolia Tank Farm – Tank Removal and Grading
    4) Proposed Magnolia Tank Farm Development
    5) Entrainment and Impingement from the Poseidon plant.

The report concludes that when the effects of these individual projects are considered together, the impacts are considerable and likely to compound other environmental impacts (as stated in CEQA Guidelines Section 15355). Based on the review of the documents provided, the author believes two key pieces are missing from the environmental review of these projects: 1) a cumulative impact analysis needs to be conducted to understand the impacts of these projects on numerous categories (especially birds, plants, air quality) and 2) a cohesive timeline in which all project pieces are considered together.

- **Santa Ana Regional Control Board Documents:**

  Attachment G - Narrowing Sites (11/21/2019). Attachment G, Section 3 (Rationale for Narrowing of the Offshore Intake/Discharge Sites) starting on page G1-42 outlines how the Santa Ana Regional Water Control Board staff assessed the best site feasible for an offshore surface intake and discharge. On page G1-42 there is a discussion on the adequacy of the plankton and fish data used for the analysis. The regional board had asked Poseidon to do additional sampling since the data available is old and inconsistent. In our comments to the board we had also asked for recent data to be collected. However Poseidon refused to produce new data. This problematic dataset is highlighted in the Summary of the Neutral Party Reviewer Report at the bottom of page G1-44:

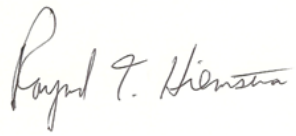
  > " Several of the findings in Dr. Raimondi's report highlighted problems with the 2003-2004 AES Huntington Beach, LLC (AES) entrainment and impingement study data that the Discharger proposed to use to assess entrainment impacts from a surface intake located near Station E." Also on page G1-44 it states "Coastal Commission staffs' calculations indicated that Station E was not the best site for location of the surface intake but that several of the alternative sites were likely to result in less entrainment than an intake located at Station E."

  On page G1-57 the Regional Board staff concluded that they could <u>not</u> agree with the Discharger's conclusion that Station E is the best site feasible for an offshore seawater surface intake based on environmental factors. <u>Dr. Raimondi's review indicates that the best site feasible, based on the dual MLC/SLC metric, is not Station E</u> but either U2 or D2.

  Santa Ana Regional Water Quality Control Report Staff Report (July 30, 2020) This report states on page 11 that "The reduction in entrainment mortality due to the use of wedgewire screens is only approximately one percent (1%) when compared to unscreened intakes". This demonstrates that wedgewire screens are ineffective technology to reduce impacts to marine life.

We respectfully request these reports be considered by the Coastal Commission as part of the administrative record. The reports individually, and in whole, demonstrate that entrainment will be a significant and ongoing adverse impact, that there are options to reduce entrainment and/or that additional mitigation is necessary to address the impacts to marine life from the project.

Sincerely,



Raymond Hiemstra
Associate Director of Programs
Orange County Coastkeeper