

January 21, 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](mailto:Tom.Luster@coastal.ca.gov)

Re: Expert Report of Poseidon – Seismic Risks of the Poseidon Desalination Plant

Dear Mr. Luster,

On behalf of the environmental coalition, we appreciate your consideration of the attached expert report and its inclusion into the administrative record. Poseidon has submitted application materials asserting that the seismic risks to the Poseidon – Huntington Beach Project are minimal. The expert report and earthquake simulation enclosed within are evidence to be considered as part of the administrative record and demonstrate that the seismic risks at the site have not been adequately examined.

The enclosed expert report prepared by Lettis Consulting was commissioned by Orange County Coastkeeper to offer an independent third-party analysis of the potential seismic risks to the Poseidon-Huntington Beach Project. The California ShakeOut earthquake simulation for Huntington Beach was produced by the USGS and the Southern California Earthquake Center.

- **[Huntington Beach Earthquake Simulation Video](#)**. The Great Southern California ShakeOut earthquake drill for Huntington Beach is based on a magnitude 7.8 scenario earthquake on the San Andreas fault in southern California. This portion of the San Andreas fault has been identified as the most likely source of a very large earthquake in California (Working Group on California Earthquake Probabilities). As part of the earthquake drill, computer simulations of the ground shaking from this scenario earthquake were constructed through a collaborative effort between the USGS and the Southern California Earthquake Center. These computer simulations capture the shaking at length scales larger than about 300 ft and provide detailed pictures of the shaking for this scenario earthquake. The simulation demonstrates that Huntington Beach would experience ‘severe’ and ‘extreme’ shaking in the vicinity of the proposed plant and would reach level X Shaking Intensity on the [MMI scale](#). It should be noted that there are other faults that are closer to the proposed plant that could cause similar seismic impacts.
- **Assessment of the Newport-Inglewood Fault Zone AES Electrical Generation Facility, Poseidon Desalination Project Newland Street and Pacific Coast Highway Huntington Beach, California**. This report, prepared by Lettis Consulting, documents a “desktop” assessment of the Newport-Inglewood fault zone and the potentially active fault strands proximal to the proposed Poseidon Water Huntington Beach desalination project site in Huntington Beach, California. The report is based on published scientific literature, maps, and available consultant reports. The purpose of the study is to summarize existing information on the Newport-Inglewood fault zone and the geology, location, and activity of local faults that may impact the proposed Poseidon project, if such information is known. The report concludes the following:
  - The South Branch fault at the site is not the principal active strand of the Newport-Inglewood fault zone. The principal active strand is located about 0.6 km (.37 of a mile) east of the site and projects offshore near the mouth of the Santa Ana River. The largest surface

displacements from future earthquake ruptures on the Newport-Inglewood fault zone are expected on the principal active fault strand, with relatively minor displacements expected on other secondary strands.

- Data do not exist to adequately assess whether the South Branch fault at the site has ruptured in the Holocene Epoch (past 11,700 yrs) and would be considered an active fault by the California Geological Survey (CGS). This fault strand has not yet met the criteria of “sufficiently active and well defined” to be included in an Alquist-Priolo Earthquake Fault Zone (APEFZ) by the CGS.
- Past studies at the Poseidon site by GeoLogic (2002), Ninyo & Moore (2011), and Geosyntec Consultants, Inc. (2013) have consistently concluded an “absence of evidence” for the presence of Holocene faulting on site. However, the subsurface exploration methods employed do not definitively preclude the presence of minor secondary Holocene fault activity at the site.
- Although there is no information that directly implicates the “South Branch” as being active, there are no data that demonstrably preclude Holocene activity. As a result, Orange County Coastkeeper believes that additional subsurface investigations should be performed to evaluate for the presence or absence of Holocene active faults.

We respectfully request that the Lettis report be considered by the Coastal Commission as part of the administrative record. The report demonstrates that additional analysis is needed to adequately assess the seismic risks at the Poseidon – Huntington Beach Project site.

Sincerely,

A handwritten signature in cursive script that reads "Raymond F. Hiemstra". The signature is written in dark ink and is positioned above the typed name and title.

Raymond Hiemstra  
Associate Director of Programs  
Orange County Coastkeeper