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California Energy Commission

**DOCKETED
12-AFC-02**

TN # 66483

AUG 06 2012



August 3, 2012

Felicia Miller, Project Manager
Siting, Transmission and Environmental Protection (STEP) Division
California Energy Commission
1516 Ninth Street, MS-2000
Sacramento, CA 95814

VIA EMAIL: Felicia.Miller@energy.ca.gov

RE: Comments on Data Adequacy Review for Application for Certification (AFC) 2012-AFC-02 – AES Huntington Beach Energy Project

Dear Ms. Miller:

Thank you for providing the AFC application and other documents related to the above-referenced proceeding. As you know, the Coastal Commission's role in the California Energy Commission's (CEC) AFC proceedings is to review power plant proposals in the coastal zone and to provide for the CEC the Coastal Commission's findings with respect to the proposed project's conformity to relevant provisions of the Coastal Act and the certified Local Coastal Program (LCP), which in this case, is that of the City of Huntington Beach. This letter provides initial comments from Coastal Commission staff pursuant to our role as prescribed by Section 25523(b) of the Warren-Alquist Act, Section 30413(d) of the Coastal Act, and as described in the May 2005 Memorandum of Agreement between the CEC and Coastal Commission.

We concur with the CEC staff's overall determination of data inadequacy identified in its July 27, 2012 Data Adequacy Analysis. We have determined that the application does not yet contain adequate information for the Coastal Commission to conclude whether the proposed project will conform to relevant provisions of the LCP and Coastal Act. Further, and as described in more detail below, we recently initiated an investigation about possible LCP violations due to AES conducting grading and vegetation removal within areas of potential wetlands at the power plant site. We expect that the information obtained during our investigation will help identify whether there are additional effects on coastal resources that will affect the CEC's AFC review. Accordingly, we request that the CEC's determination of Data Adequacy be held in abeyance until the applicant provides the information requested below and until Coastal Commission staff completes its investigation.

General Comments:

- **Need for comprehensive assessment:** Many of our comments and information requests below are interrelated – for example, our concern about potential noise impacts to nearby breeding and nesting bird species is related to our request for information about potential alternative facility layouts that may reduce those noise-related impacts. Similarly, our

information requests about geologic hazards could result in various facility components being sited in different locations than currently proposed. We therefore request the applicant address the information requests below both specifically and comprehensively.

We also recommend the CEC more fully incorporate into its AFC review the desalination facility being proposed within the power plant site by Poseidon Resources and the reservoir being proposed by the City. The application currently includes only a few brief mentions of the proposed desalination facility; however, the combined proposals raise what could be significant cumulative impacts in several issue areas.¹

- **Investigation of possible violation:** As noted above, Coastal Commission staff recently opened an investigation into possible violations regarding grading and vegetation removal in potential wetland areas within the power plant site. A Commission staff site visit in 2009 and a wetland delineation provided by Poseidon Resources in 2010 identified wetland characteristics in several areas of the power plant site, while a site visit in July 2012 revealed that those areas had been recently graded and the vegetation removed. The additional information we expect to be provided or developed during the investigation will likely be relevant to several aspects of the AFC proceedings – e.g., presence (or absence) of sensitive biological resources, potential for alternative site layouts, etc. We therefore request that the CEC's determination of data adequacy be held in abeyance until we complete this investigation and provide to you relevant information that will be necessary to the AFC proceedings.

Comments on Biological Resources (AFC Section 5.2): We concur with the CEC staff's Data Adequacy analysis identifying the need for several types of biological resources information not yet included in the application – e.g., plant surveys, identification of nearby sensitive biological resources, etc. In addition, and as noted above, we expect to obtain information about potential wetland effects as part of our ongoing investigation. That information will likely be a necessary part of the AFC review.

We also request that the AFC application include more specific information about potential effects of project-related noise on nearby sensitive species. Although the application includes a general description of possible noise-related effects, we will need a specific and detailed analysis of construction and operational noise on species within the adjacent Magnolia Marsh, which includes nesting habitat for several sensitive bird species. This should include expected sound levels at those habitat receptor locations adjacent to the power plant site and should identify mitigation measures that would avoid or reduce any potential impacts resulting from those sound levels.

¹ Regarding this issue, we note that the application cites a 2005 Recirculated Environmental Impact Report for the proposed desalination facility, but does not appear to cite the more recent 2010 Subsequent Environmental Impact Report for that project. We recommend the application be modified to incorporate relevant updated information about the project site from the 2010 report.

Comments on Geologic Hazards (AFC Section 5.4): The power plant site has several known geologic hazards. As noted in the 2010 Supplemental EIR for the proposed Poseidon desalination facility, the site has a fault running directly beneath it, has the potential for surface rupture, could experience ground motions greater than 1g, has corrosive soils, and could experience liquefaction, lateral spread, and subsidence resulting from seismic events. The site is also within a tsunami runup zone that extends some distance inland. Any of these site characteristics could affect project feasibility, require project components be relocated, or could result in significant adverse effects on coastal resources. We therefore request that the applicant provide detailed, site-specific information about this suite of geologic hazards. The information provided should be consistent with that we requested for the proposed Poseidon project, which is further described in the attached July 13, 2012 letter.

Comments on Cumulative Impacts: The application includes several brief mentions of the desalination facility being proposed within the power plant boundary, but does not include sufficient information about likely or potential cumulative impacts that could occur during concurrent construction and operation of the repowering and desalination projects. We understand an additional project – construction of a reservoir for use by the City of Huntington Beach – is also proposed within the power plant boundary. The proposed project schedules and locations of project components could result in substantial cumulative impacts that will need to be evaluated during the AFC process. For example, the AFC proposes to use up to several hundred offsite public parking spaces during the several years of project construction, and use of these spaces may adversely affect public access to the shoreline. However, if areas within the power plant site now set aside for the desalination facility or reservoir are available during all or part of the power plant construction, the adverse public access effects of offsite parking could largely be eliminated.

We request that the applicant supplement the AFC application to include detailed schedules for the three proposed projects and to identify potential modifications to those schedules and proposed project layouts that could avoid or reduce potential cumulative impacts to coastal resources. The application should also include a description of the legal interests and site control throughout the power plant site boundary (e.g., existing or proposed land ownership, leases, or easements for each of the proposed projects, other easements for components such as the onsite substation, etc.) to illustrate potential alternative locations that may fully or partially mitigate these cumulative impacts (see also Alternatives below).

Comments on Alternative Site Layouts and Locations for Other Project Components:

Related to the above request, information provided in the application suggests that there may be alternative configurations for components of the proposed facilities within the plant boundary, and that several of these potential alternative locations could result in substantially fewer impacts to coastal resources. For example, as noted above, the proposed expansion would place relatively high noise-generating power plant components adjacent to sensitive wetlands known to provide breeding and nesting habitat for sensitive species. Some or all of these components might be proposed for locations within the plant boundary but further from this sensitive habitat, as AES had proposed in a previous potential facility expansion. Similarly, conclusions of the geologic hazards studies could result in modified locations for project components. We therefore

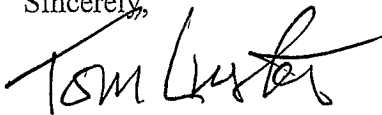
request the applicant provide for evaluation during the AFC proceedings feasible alternatives to the proposed locations of components of the various proposals to determine whether alternative layouts would avoid or reduce potential impacts to coastal resources.

Along with considering alternative locations for the currently proposed facilities, we also request that the application be supplemented to identify potential alternative locations for other project components. For example, and as noted above, the current proposal would use a significant number of public parking spaces used for coastal access – the applicant should identify what opportunities exist for siting all or some of this parking within the power plant boundary.

Closing

Thank you for the opportunity to comment. We look forward to working with the CEC on this project. Please feel free to contact me at 415-904-5248 or tluster@coastal.ca.gov if you have questions.

Sincerely,

A handwritten signature in black ink that reads "Tom Luster". The signature is written in a cursive, slightly slanted style.

Tom Luster
Staff Environmental Scientist
Energy, Ocean Resources, and Federal Consistency Division

Cc: AES – Jennifer Didlo

Attachment: July 13, 2012 information request letter from Coastal Commission staff to Poseidon Resources

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July 13, 2012

Mr. Scott Maloni
Poseidon Resources
17011 Beach Blvd., Suite 900
Huntington Beach, CA 92647

VIA EMAIL: Smaloni@Poseidon1.com

RE: Notice of Incomplete Coastal Development Permit (CDP) Application #E-06-007 –
Poseidon Resources proposed Huntington Beach Desalination Facility

Dear Mr. Maloni:

This letter provides follow-up clarification to several of the information requests we sent on March 20, 2012. As we discussed at our meeting on May 21st and in our letter to you on June 20th, this letter describes additional specific information needed to complete Poseidon's CDP application. The information requested below is based on review and comments by the Commission staff geologist and coastal engineer, and the requests are associated with issues related to geologic hazards, project stability, and modeling the geotechnical, geophysical, and hydrogeologic conditions at and near the proposed project site. As always, we would be happy to meet with you to discuss or provide more detail about any of these requests.

INFORMATION REQUESTS – GEOLOGIC HAZARDS AND PROJECT STABILITY

We previously requested that Poseidon provide site-specific information needed to evaluate several of the geologic hazards at the proposed project site to ensure project stability. Our requests have been based in part on the project's 2010 Supplemental Environmental Impact Report (SEIR) stating the proposed site has a fault running directly beneath it, has the potential for surface rupture, could experience ground motions greater than 1g, has corrosive soils, and could also experience liquefaction, lateral spread, and subsidence resulting from seismic events. Any of these site characteristics could affect project feasibility, require project components be relocated, or could result in greater adverse effects on coastal resources than were evaluated in the SEIR.

Poseidon's responses have largely referred to sections of the SEIR and the earlier 2006 Recirculated EIR (REIR); however, both of those documents acknowledged the limited site-specific data on which their analyses were based. Both also included geologic hazard mitigation measures that required Poseidon to conduct site-specific investigations and studies meant to provide the additional information needed to adequately characterize these geologic hazards and to identify how the proposed project may need to be changed to account for the various hazards. Our information requests below are meant to clarify our previous requests regarding results of the required investigations, studies, and analyses identified in the SEIR's Mitigation Measures GEO-1 through GEO-9.

- **Surface fault rupture and structural stability:** The SEIR and other submitted documents identify a subsurface fault directly beneath the proposed project site. Mitigation Measure GEO-1 of the SEIR required Poseidon to conduct a fault hazard investigation to determine the location and extent of this fault and to identify the potential for surface fault rupture.

Please provide the results of that investigation. We recommend that it be conducted in conformance with the Guidelines for Earthquake and/or Fault Hazard Reports originally published by the Board for Geologists and Geophysicists (now contained within the Board for Professional Engineers, Land Surveyors, and Geologists). The investigation should consist of direct trenching across suspected areas of recent faulting, covering the entire site in trenches oriented southwest-northeast. Detailed trench logs and radiocarbon dating of strata should be provided. If direct trenching is not possible, closely spaced (10 feet on center) cone-penetrometer test borings and detailed stratigraphic interpretation should be performed. Other methods, such as seismic reflection profiling or ground-penetrating radar may supplement these techniques. These investigations should evaluate the risk of surface rupture affecting the proposed project. Additionally, based on results of the investigation, please also identify proposed changes to the project layout, along with associated changes to the design, engineering, mitigation, and other measures needed to avoid fault-related hazards and to ensure structural stability.

- **Lateral soil spread:** The SEIR also identifies the potential for lateral soil spread at the project site and required through Mitigation Measure GEO-2 that Poseidon conduct a site-specific geotechnical investigation to determine the potential for lateral spread and its effects on the proposed project. Please provide the results of that study, and similar to the above request, please identify proposed changes to the project layout, along with associated changes to the design, engineering, mitigation, and other measures needed to avoid the risk of lateral soil spread and to ensure structural stability.
- **“Design-level” earthquake:** As required by SEIR Mitigation Measure GEO-3, please identify the “design-level” earthquake as determined through the required geotechnical/geophysical investigations and in conformity with the most recent update of the Uniform California Earthquake Rupture Forecast. Please also provide seismic design parameters corresponding to the most recent update of the California Building Code.

This determination should describe the maximum credible earthquake and peak ground acceleration at the proposed project site. It appears from recent available geologic studies that the nearby Newport-Inglewood Fault has a maximum probable magnitude of about 7.1 and a maximum ground acceleration of about 1 g. Please also provide the structural design parameters Poseidon will use to assure that the facility’s components will be designed and engineered to withstand these identified “design-level” forces.

- **Liquefaction:** The SEIR notes that liquefiable soils could occur to about 17 feet below ground surface (bgs). More recent nearby surveys show potentially liquefiable soils to a depth of about 40 feet bgs. The project description also states that the facility would be placed on stone columns to reduce liquefaction-related risk; however, the SEIR also acknowledges that the required site-specific geotechnical and geophysical survey results could show that the facility would need a different support system.

As part of the above-referenced geotechnical/geophysical investigations, please identify the areas and depths of soils onsite with liquefaction potential that could affect the location or design of project components. Please also identify proposed changes to the project layout, along with associated changes to the design, engineering, mitigation, and other measures needed to avoid the risk of liquefaction and to ensure structural stability

For all relevant geologic hazards above, please provide the analyses required in SEIR Mitigation Measures GEO-4 and GEO-9 describing measures to be incorporated into the project location and design to avoid geologic hazard risks and to ensure structural stability.

INFORMATION REQUESTS – TSUNAMI HAZARDS AND RISKS

We previously asked Poseidon to provide an updated assessment of hazards to the proposed project from tsunamis and to identify what design modifications and mitigation measures Poseidon would implement to avoid and reduce tsunami-related impacts. Our previous information requests noted that the tsunami risks identified in the project SEIR and City's CDP were based on out-of-date information. For example, the 2010 SEIR used studies published in 1985 and 1996 to conclude that maximum tsunami heights of 7.5 feet above mean sea level would result in the proposed project being at low risk of tsunami-related hazards; however, more recent studies, including some available at the time the SEIR was published, suggest the proposed project would be at much higher risk, with expected maximum tsunami heights of 16.0 feet and a tsunami runup zone extending more than a mile inland of Poseidon's proposed site. The project submittals were also inconsistent in describing existing and proposed elevations at the project site – for example, the SEIR states both that the existing site is about five feet above sea level and that the site ranges from nine to 14 feet above sea level. It states in one section that proposed site elevations will range from nine to 14 feet above mean sea level and that all building foundations will be at least ten feet above mean sea level, while stating elsewhere that proposed structures will be at five to 10.5 feet elevation. Further, its descriptions of project grading appear to provide for less than three feet of fill over the 11-acre site. Additionally, the City's CDP did not evaluate the proposed project for consistency with several of its Environmental Hazard policies relevant to tsunami-related hazards.

To clarify our previous requests, we specifically request Poseidon provide the information described below:

- **Site-specific information:** Please provide surveyed elevations (above mean sea level) of existing site features, of proposed changes to those features, and of the proposed facility components. This should include elevations of existing grades within the proposed facility footprint, including existing on-site berms, and proposed final elevations of all project components, including buildings, tanks, pumps, and any proposed changes to berms, flood control features of the adjacent flood channel, and other on- and off-site project elements. Please also identify the amounts and locations of fill needed to attain the proposed elevations.

- **Use of updated studies and information:** As noted above, we requested Poseidon assess tsunami hazards based on more recent studies than those used in the project SEIR and the City's CDP. We recommend the assessment incorporate data from the following reports and documents:

Orange County – Emergency Operations Plans: Tsunami Annex (2006, scheduled to be updated in 2012). Available at:

<http://egov.ocgov.com/vgnfiles/ocgov/EOC/Doc/TsunamiAnnex-CountyPlanModification.pdf>

Orange County Grand Jury report on Tsunami Hazards (September 2008). Available at:
<http://www.ocgrandjury.org/pdfs/tsunami/tsunami-report.pdf>

California Geological Survey – Tsunami Inundation Map (March 2009). Available at:
http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/Orange/Documents/Tsunami_Inundation_NewportBeach_Quad_Orange.pdf

City of Huntington Beach Local Hazard Mitigation Plan (Draft – December 2011; scheduled for adoption in 2012). Available at:
<http://www.huntingtonbeachca.gov/files/users/fire/draft-hazard-mitigation-plan.pdf>

National Academy of Sciences – Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future (June 2012). Available at:
<http://www8.nationalacademies.org/onpinews/newsitem.aspx?RecordID=13389>

As noted above, several of these documents describe an expected maximum tsunami height in the project area of about 16.0 feet; however, they also note that this expected tsunami height does not include the higher wave heights that could result from tides, storm-generated waves, or sea level rise. The above-referenced 2012 National Academy report identifies an anticipated sea level rise of up to about three feet over the expected life of the proposed development. Therefore, Poseidon's updated tsunami hazard assessment should be based on an expected maximum 16-foot tsunami runup height and should incorporate the additional height needed to reflect high tide levels and a three-foot sea-level rise.

- **Design modifications and mitigation measures:** Based on the updated site-specific information and tsunami assessment, please identify the design modifications and mitigation measures Poseidon will employ to avoid and reduce tsunami-related risks. This should include the expected water elevations serving as the basis for the assessment and should describe the method, location, and design basis for any structural components – e.g., the engineering strength of proposed structural components, consistency with the above-referenced UBC requirements, etc. For example, the project description states that the site includes a partial 10- to 15-foot high berm around part of the proposed facility location – if Poseidon's proposed risk reduction measures include extending, heightening, or reinforcing the berm, please provide a detailed description of how that will be implemented. Please also identify the location and amount of grading/fill expected, including the fill needed to raise facility foundations, to increase or create new berms or flood protection measures, etc. The location and characteristics of any proposed fill should be incorporated into, and consistent

with results of, the above-referenced geotechnical/geophysical investigations and analyses required pursuant to Mitigation Measures GEO-1 through GEO-9. Additionally, because proposed tsunami risk reduction measures could also affect on- and off-site flood risk, please also provide an updated assessment of on- and off-site flood hazards resulting from the proposed changes to the site and facility, along with detailed descriptions (i.e., method, location, and design basis) of proposed new or modified flood control measures and structures on or near the project site.

INFORMATION REQUEST – ANALYSIS OF ALTERNATIVE INTAKES

We previously requested that Poseidon provide the site-specific data used to support contentions that any intakes other than the existing power plant intake structure are infeasible. Your response included previously-provided information from the SEIR and other documents, but it appears the conclusions of those documents were based on limited, if any, site-specific geophysical, geotechnical, or hydrogeologic data from at or near the proposed project site or the sites where alternative intakes might be sited. Most data provided thus far is largely from sites some distance from the proposed facility – for instance, from sampling done at groundwater injection wells up to several miles from the proposed project site and from sampling done several miles downcoast at a site with different characteristics. Additionally, it appears that some of the presented conclusions about site characteristics contradict others – for example, the SEIR shows an area of expected well drawdown extending into an area that it elsewhere identifies as having an aquitard that would prevent drawdown effects. We had also previously requested Poseidon provide the data and modeling approach it used in the project's Talbert Gap drawdown analysis, including the assumed aquifer dimensions and characteristics, as well as the Theis equation approximation used in the model. As noted above, it appears that the analysis applied data and results from a different location that has different characteristics.

Please provide the following specific information:

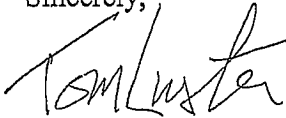
- Geotechnical, geophysical, and hydrogeologic data collected from the proposed project site and from sites identified as potential locations for alternative intakes that were used in the above-referenced intake feasibility determinations and modeling effort. These should include any data collected or obtained regarding hydrologic continuity, transmissivity, storativity, or other similar site characteristics used to evaluate feasibility.
- Sampling locations where the above data were obtained and the sampling methods used to obtain those data.
- Describe how these data were incorporated into the relevant modeling and analyses of alternative intake evaluations.

If the above-site specific data have not yet been obtained, we would be happy to provide further recommendations on what data collection methods and analyses would provide sufficient basis for completing this aspect of the CDP application.

CLOSING

Thank you very much for your attention to these requests. As we have discussed, we would be happy to review draft submittals for completeness before Poseidon submits final documents to ensure the information is adequate for completing Poseidon's application. As always, please feel free to contact me at 415-904-5248 or tluster@coastal.ca.gov if you have questions.

Sincerely,

A handwritten signature in black ink that reads "Tom Luster". The signature is written in a cursive, slightly slanted style.

Tom Luster

Energy, Ocean Resources, and Federal Consistency Division