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GEOLOGY AND PALEONTOLOGY

Rebuttal Testimony of Garry Maurath, PG

This rebuttal testimony supplements and clarifies the information in the Final Staff Assessment for the Alamitos Energy Center project. On October 14, 2016 the AES Alamitos Energy, LLC, (Applicant) submitted opening testimony for the Alamitos Energy Center Application for Certification (13-AFC-01), and staff has reviewed this testimony. The applicant raised a number of concerns regarding Condition of Certification **GEO-2** and recommended eliminating the condition. Staff understands the applicant's concerns but concludes the condition is still necessary to ensure worker safety. Based on comments made in the Applicant's opening testimony, staff proposes some modifications to the condition, which are set forth below. These modifications are designed to streamline implementation of **GEO-2**. Staff also offers additional testimony pertaining to **GEO-2**.

The applicant indicated that requiring every visitor to the AEC site to receive tsunami hazard training would represent a burdensome "training" requirement. **GEO-2** no longer requires that every visitor, no matter what the purpose, must receive the training. The condition clearly states that the primary purpose is to protect worker safety. Site Emergency Action Plans address visitor safety. As long as visitors are accompanied by trained staff while they are on-site, additional tsunami hazard training would not be necessary.

The applicant indicated that the Los Angeles County Operational Area Emergency Response Plan (LACO AERP) (LACO A 2006) was written as a guidance document for government agencies on how to respond to emergencies and does not contain recommendations and procedures specifically applicable to private entities. Staff concurs; however, the LACO AERP is intended to ensure the most effective allocation of resources for the maximum benefit and protection of the public in time of emergency. It specifies that coastal communities and special districts are responsible for developing tsunami emergency response plans that are compatible with the LACO AERP Tsunami Annex. The LACO AERP provides a vetted framework for emergency response and offers a consistent and understood process for addressing tsunami hazards. By using a common framework, county and city emergency responders and facility staff can better interact and coordinate during a tsunami event. This coordination and common emergency narrative will protect the safety of both facility workers and emergency first responders.

In addition, the LACO AERP contains a considerable amount of information necessary to formulate the Tsunami Hazard Mitigation Plan (THMP), such as coordination of evacuation routes, contact information for local emergency response officials, detailed explanation of the local tsunami warning system, and detailed information on personal safety and preparedness for a tsunami. Staff believes information contained in the LACO AERP would simplify the process of THMP development by using existing information and protocols. This would reduce the time and costs of compliance.

The modifications described below for **GEO-2** streamline the implementation of **GEO-2** to ensure that adequate training is conducted and all personnel on-site are prepared to respond to a tsunami threat or event.

PROPOSED CONDITIONS OF CERTIFICATION

GEO-2 The project owner shall ensure that all staff and visitors at the project site are informed of tsunami hazards in the region and have been shown how and where to evacuate the site if there is potential for a tsunami. ~~to affect public health and safety at the site.~~ The project owner shall ensure that the **emergency response and evacuation** information provided to staff and visitors complies with the ~~recommendations and procedures provided in the~~ 2006 Tsunami Annex to the Los Angeles County **Operational Area** Emergency Response Plan (LACOA 2006) and any of its successors. The project owner shall provide a Tsunami Hazard Mitigation Plan (THMP) to the Compliance Project Manager (CPM) for review and approval.

The THMP shall include:

- A. A general discussion of tsunami hazards and the public safety risk they present at the site.
- B. Identification of what tsunami hazards exist specific to the project site and how the project owner proposes to ensure compliance with applicable hazard response plans.
- C. A discussion of the Tsunami Annex to the Los Angeles County **Operational Area** Emergency Response Plan and how that plan applies to the project.
- D. A discussion of criteria for a response to ensure public safety for a tsunami event and show where on and offsite refuge can be accessed, and evacuation routes.
- E. Identification of any site modifications or signage that may be needed to show how and where refuge is accessible.
- F. The THMP shall also include a training program for ~~visitors and workers,~~ which could be incorporated with ~~other safety training programs such as those required in WS-1 and WS-2~~ **the construction Emergency Action Plan and the Emergency Action Plan for operation required under WORKER SAFETY-1 and WORKER SAFETY-2 respectively.** The purpose of training is to inform workers ~~and visitors~~ on how to respond to tsunami **threats and events** ~~hazards~~ and where they may obtain refuge in the event it is determined necessary to evacuate the project site. The training shall include:
 - i. Information on who and how staff and visitors will be notified that there is a potential for a tsunami event to impact the site and how they should respond;

- ii. Graphics showing methods of seeking refuge and routes for evacuation of the site;
- iii. A certification of completion form signed by each worker/visitor indicating that he/she has received the training; ~~and~~
- iv. Submittal of the training script and, if the project owner is planning to use a video for training, a copy of the training video, with the set of reporting procedures for workers to follow that will be used to present the training; and.
- v. Provision for conducting a tsunami evacuation drill for the entire site at least once every two years or in conjunction with other safety drills. A report summarizing the results of an evacuation drill, including a list of participants and any recommendations for modification of the THMP arising from issues identified during conduct of these drills shall be prepared.

The THMP shall be updated ~~at least bi-annually, or whenever the tsunami hazard section of the Los Angeles County All Hazard Mitigation Plan is updated~~ to ensure the current assessment of the tsunami hazard and risk assessment is representative and that appropriate measures are taken to comply with current requirements. The project owner shall submit the updated THMP for CPM approval.

Verification: The project owner shall submit the THMP 60 days prior to ground disturbance for CPM review and approval. The project owner shall submit any subsequent updates to the THMP to the CPM within 90 days after an update to an applicable THMP. The project owner shall submit a summary report of an evacuation drill within 60 days of the drill's conclusion.