

DOCKETED

Docket Number:	09-AFC-07C
Project Title:	Palen Solar Power Project - Compliance
TN #:	201088
Document Title:	Exhibit 2011 – Conditions of Certification PAL-5 and PAL-9
Description:	N/A
Filer:	Tiffani Winter
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	10/31/2013 1:14:48 PM
Docketed Date:	10/31/2013

GEOLOGY AND PALEONTOLOGY

Proposed Revisions to Conditions of Certification PAL-9 and PAL-5

Staff has revised its proposed Condition of Certification PAL-9 to more accurately reflect the purpose and intent of the mitigation measure.

PAL-9 **The project owner shall prepare a paleontological characterization plan suitable to adequately assess for the paleontological resources of the subsurface in the mirrored solar field area. The intent of the plan is to describe the methodology to be used to complete a representative subsurface sampling of the site to collect, analyze, and make available for research sensitive paleontological resources that will be damaged by installation of pylons in the mirrored solar field area. The plan shall be provided to the compliance project manager (CPM) for review and approval.**

Following CPM approval of the plan, the project owner shall conduct the paleontological resources characterization of the subsurface in the solar field area. The characterization shall be conducted in accordance with the Bureau of Land Management (BLM) “Guidelines for Assessment and Mitigation of Potential Impacts to Paleontological Resources”.

The characterization shall include subsurface excavations within the proposed solar field to a depth equal to the maximum depth of panel post insertion. All excavations shall be logged and sampled by a qualified paleontologist under the direct supervision of the paleontological resource specialist (PRS). The number of excavations shall be statistically significant determined in accordance with current statistical procedures similar to those presented in *Information Technology, Learning, and Performance Journal, Vol. 19, No. 1, Spring 2001.*

Following completion of the field work, the project owner shall document the findings and interpretations in a paleontological characterization report. The paleontological characterization report shall contain:

- 1. Date(s) of the fieldwork and names of any personnel assisting with the fieldwork.**
- 2. Brief description of project and expected impacts to paleontological resources.**
- 3. A description of field methods used.**
- 4. A summary of findings, including important discoveries.**

5. A discussion of the significance of the findings/discoveries paleoecology of the site interpreted from the findings.
6. A description of potentially fossiliferous areas to allow for future assessment of sites, even if no fossils were located during the project monitoring characterization effort.
7. A completed BLM locality form 8270-3 or equivalent for each new locality, using Universal Transverse Mercator (UTM) NAD 83 coordinates, and 1:24000 scale maps with new localities plotted using points or polygons as appropriate.
8. Locality forms, maps, and any other information containing specific fossil locations will be bound separately or assembled as a separate section to allow for preservation of confidential locality data.
9. List of specimen field numbers and field identifications of collected material, cross-referenced to the locality field number. This list may be submitted in electronic format, preferably in a spreadsheet format.
10. A summary of regional and local geology; this will reference earlier projects for relevant information.
11. A summary of regional and local paleontology; this will reference earlier projects for relevant information.
12. Potential impacts to paleontological resources resulting from the project.
13. Map of project area, indicating areas surveyed, known localities, and new discoveries.
14. Relevant photos, diagrams, tables to aid in explaining, clarifying, or understanding the findings.

If the CPM determines significant paleontological resources are statistically significant at the site the project owner will be required to implement one of the following:

- A. Provide an assessment of how avoidance of the sensitive geologic units containing significant paleontological resources may be accomplished so impacts can be minimized. The CPM shall review and approve the assessment prior to implementation.
- B. Where avoidance cannot be achieved in all or part of the solar field the Project Owner shall provide an assessment of alternative foundations design and construction methods that may be used in the areas where significant paleontological resources are identified. The CPM shall review and approve the assessment prior to implementation.
- C. Where avoidance and alternative foundation design and construction cannot be accomplished The project owner shall assure the conduct additional excavation and collection of paleontological resources are

submitted for curation such that the collection adequately assesses represents the scientific significance of the site and preserves a cross-section of material that can be used for future analysis and the benefit of public appreciation.

If the results of the study show that there are no or limited significant paleontological resources in the solar field where pylons will be driven the CPM may find that monitoring and mitigation in accordance with Condition of Certification PAL-1 through PAL-8 are adequate to ensure no significant impacts.

Verification:

- 1) At least 90 days prior to the start of ground disturbance, the project owner shall submit the paleontological subsurface characterization plan to the CPM for review and approval.
- 2) At least 30 days prior to in the ground disturbance, the project owner shall initiate field work in the areas where ground disturbance will first be conducted. The field work shall proceed sequentially in areas scheduled for panel foundation installation and shall precede panel foundation installation by a period of not less than 7 days.
- 3) At least 30 days prior to ground disturbance installation of pylons in the solar field, the project owner shall provide to the CPM for review and comment, the draft characterization report and records showing that adequate collection, identification and curation of sensitive paleontologic resources has been completed a panel foundation construction schedule to the CPM.
- 4) No more that 90 days after completion of panel foundation construction, the project owner shall provide the CPM a draft paleontological characterization report for review and comment.
- 5) The findings of the solar field paleontological characterization shall be incorporated into the PRR required in PAL -7, above.

Staff believes the requirement added to Condition of Certification **PAL-5** to have a PRS monitor 20 borings performed as part of the final geotechnical evaluation would be unnecessarily duplicative of the requirements set out in Condition of Certification of **PAL-9**, and therefore suggests the following language be deleted from Condition of Certification **PAL-5**

~~**In addition to the monitoring activities above, the PRS shall monitor, consistent with the PRMMP, at least twenty (20) of the borings performed as part of the final geotechnical evaluation of the subsurface properties within the solar fields.**~~