

**RIDGECREST SOLAR POWER PROJECT (09-AFC-9)  
CEC STAFF DATA REQUEST NUMBERS 79 -118**

**Technical Area: Cultural Resources (AFC Section 5.4)**

**Response Date: January 25, 2010**

In a letter dated December 1, 2009, the staff of the California Energy Commission (CEC) provided guidance to Ridgecrest Solar I, LLC (the Applicant) concerning the review of cultural resources under Federal (National Environmental Policy Act [NEPA] and Section 106 of the National Historic Preservation Act [NHPA]) and State (California Environmental Quality Act [CEQA]) law. The letter outlined three approaches, each of which requires an equally thorough review of cultural resources under the law by the CEC and the Bureau of Land Management (BLM).

The first approach is typically used for projects with a relatively small number ( $\leq 75$ ) of cultural resources. Under this approach, Applicants would complete all investigations necessary to identify, evaluate the significance of, and assess the reasonably foreseeable impacts to cultural resources in the Project area before the CEC's Staff Assessment.

The second approach is commonly used for projects with a larger number ( $> 75$ ) of cultural resources. Under this approach, the CEC and the BLM would draft their joint CEQA and NEPA analysis on the basis of an assessment of a large sample ( $\geq 25$  stage) of the cultural resources identified during inventory. On the basis of the inventory and sample, a Programmatic Agreement (PA) concerning the disposition of cultural resources would be executed as part of the NHPA section 106 process. All further cultural resources compliance work would be subject to the provisions of the PA.

The third approach was developed by the CEC and BLM staff to facilitate the review of certain solar thermal projects with compressed review schedules, including the RSPP. Under this approach, all inventoried cultural resources would be assumed to be historically significant for the purposes of the joint CEQA and NEPA analysis. Those cultural resources that staff could determine to be not historically significant on the basis of extant inventory information, or those that would not be affected by the project, could be excluded from further assessment work. Thorough consideration and treatment of cultural resources in the Project area would be ensured through the use of a phased treatment plan as specified in a Memorandum of Agreement pursuant to the NHPA Section 106 process. This treatment plan would be executed after the issuance of the CEC's Staff Assessment but before the onset of construction.

Subsequent to the receipt of the December 1, 2009 letter, the Applicant received the CEC's Data Requests for Cultural Resources as part of the combined RSPP Data Requests Set 1, dated December 22, 2009. In those requests, staff indicated which data requests for cultural resources must be answered under each of the three specified approaches. Under Approach 1, responses to all of the data requests for cultural resources are required. Under Approach 2, responses to all but Data Request (DR) 105 are required. Under Approach 3, responses are required to only DRs 89, 94-96, 99-116. The Applicant has chosen Approach 3 for the assessment, treatment, and disposition of cultural resources affected by the RSPP. Therefore, responses are provided only in the following pages for those DRs specified by CEC staff as required under Approach 3.

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**DR-CUL-79**

**Information Required:**

In a table, please list all linear facilities that entail trenching or the excavation of holes for footings, and provide, for both the on- and off-site segments of each, the total length of each facility, and the trench dimensions (width and depth of excavation) required to install each.

**Response:**

No response required under Approach 3.

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**Response Date: January 25, 2010**

**DR-CUL-80**

**Information Required:**

In a table, please list all buildings and equipment whose foundations require excavation and provide the dimensions and depths of holes that would be dug to construct these foundations.

**Response:**

No response required under Approach 3.

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**DR-CUL-81**

**Information Required:**

In a table, please list all buildings and structures the project would erect and provide the height of each.

**Response:**

No response required under Approach 3.

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**DR-CUL-82**

**Information Required:**

Please provide, for both solar fields, the maximum elevation range and the finished grade elevation.

**Response:**

No response required under Approach 3.

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**DR-CUL-83**

**Information Required:**

Please provide, for both solar fields, a description of any terracing required for the installation of the collectors, including any necessary stormwater drainage system.

**Response:**

No response required under Approach 3.

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**DR-CUL-84**

**Information Required:**

Please provide Figure 2-4 revised as a series of color figures at a larger scale (suggested: 1"=500 feet) and using colored line types to show linear facility routes and other project features such as fences and roads of various types.

**Response:**

No response required under Approach 3.

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**DR-CUL-85**

**Information Required:**

Please include in the revised Figure 2-4 series, in addition to components already depicted, the following additional project components:

- a) on-site transmission lines
- b) off-site transmission lines, new and re-routed
- c) on-site fiber optic system, overhead and/or underground, on- and off-site
- d) on-site steam lines
- e) on-site and off-site water pipelines
- f) on-site firewater system pipelines
- g) septic tanks and leach fields
- h) drainage diversion channels
- i) all project-constructed roads, on- and off-site
- j) culverts
- k) land treatment unit

**Response:**

No response required under Approach 3.

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**DR-CUL-86**

**Information Required:**

Please provide a discussion of the dimensions and depth of ground disturbance that would result from removal of the supports for the two lines.

**Response:**

No response required under Approach 3.

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**DR-CUL-87**

**Information Required:**

If the Inyokern-Kramer 230-kV transmission line is older than 45 years:

- a) Please have a qualified architectural historian provide a discussion, supported by documentation, of the line's potential eligibility for the NRHP and the CRHR.
- b) Please have the qualified architectural historian provide a discussion, supported by documentation, on all seven aspects of integrity for the Inyokern-Kramer 230-kV transmission line.
- c) Please have the architectural historian complete for submission to staff the DPR 523b (Building, Structure, and Object) and DPR 523e (Linear Structure) forms for the Inyokern-Kramer 230-kV transmission line.

**Response:**

No response required under Approach 3.

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**DR-CUL-88**

**Information Required:**

If the area into which the two SCE lines would be re-located has not previously been surveyed for cultural resources:

- a) Please have a qualified archaeologist survey these sites and record on Department of Parks and Recreation (DPR) 523 forms any cultural resources that are identified; and
- b) Please submit to staff, under confidential cover, a report on the methods and results of these surveys, with recommendations for the treatment of any cultural resources identified in the surveys.

**Response:**

No response required under Approach 3.

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**DR-CUL-89**

**Information Required:**

Please submit for staff review and approval a research plan to locate and identify the configuration of the Gold Hill #1, Gold Hill #2, and Jumbo mines in section 35, T27S R39E (or, alternatively, in section 35, T27S R40E), and to recommend whether nearby historic-period archaeological sites are associated with these mines (and, if so, which ones), and whether the sites together possibly constitute an archaeological district. The research plan should include:

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- a) Having a qualified historian search for and copy records of the mines in the Kern County Recorder's and Assessor's Offices. The name of the mine owner was Frank A. Huntington of 21 Fremont Street, San Francisco, California. Staff will provide notes on the mines and a copy of the relevant portion of the 1904 "Bureau of Mines Map and Register of Mines and Minerals of Kern County." Gold Hill #1 is shown in the NE ¼ of section 35, Gold Hill #2 in the SE ¼ and Jumbo is depicted slightly west of the midpoint of the section;
- b) Conducting a field verification of the mines, if located, recording and mapping them on Department of Parks and Recreation (DPR) 523 forms, and using geophysical methods, such as Ground Penetrating Radar, to identify and map unfilled subsurface tunnels, shafts, and drifts, etc.;
- c) Having a qualified historical archaeologist review the collected information on early twentieth-century historic-period archaeological sites in section 35, discuss all pertinent data supporting or discounting the presence of an archaeological district based on a mining theme, and make a recommendation on the eligibility of such a district for the NRHP and/or the CRHR. In addition to the mines themselves and any roads or trails in section 35, the following sites, at a minimum, should be considered as potential contributors to the district—
  - i. Sites having blasting powder cans (RS-162/163, RS-728/731, RS-739, and RS-7520);
  - ii. Sites dating to the early twentieth century (RS-325, RS-607, RS-614, RS-726, RS -742, RS-746, RS-750, and RS-757).

**Response:**

A research plan to identify and locate the configuration of the Gold Hill #1, Gold Hill #2, and Jumbo mines, and addressing map research and archaeological site information as requested, will be submitted to the CEC by 2/26/2010. Field verification including ground penetrating radar will be submitted to the CEC by 3/31/2010.

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**DR-CUL-90**

**Information Required:**

Please submit to staff a research report including the results of the archival research and the geophysical testing, the discussion and eligibility recommendation regarding an archaeological district in section 35, copies of all county records, and DPR 523 forms for the three mines.

**Response:**

No response required under Approach 3.

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**DR-CUL-91**

**Information Required:**

Please provide to staff any information on Native American concerns about the proposed project received by the applicant since August, 2009.

**Response:**

No response required under Approach 3.

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**DR-CUL-92**

**Information Required:**

Please provide the dimensions and depth into the ground of the hole excavated for the Land Treatment Unit.

**Response:**

No response required under Approach 3.

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**DR-CUL-93**

**Information Required:**

Please provide a description of the process of constructing the Land Treatment Unit.

**Response:**

No response required under Approach 3.

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**DR-CUL-94**

**Information Required:**

Please indicate whether the proposed project may use any non-licensed, non-commercial soil borrow or disposal sites. If so:

- Please have a qualified archaeologist survey these sites and record on Department of Parks and Recreation (DPR) 523 forms any cultural resources that are identified; and
- Please submit to staff, under confidential cover, a report on the methods and results of these surveys, with recommendations for the treatment of any cultural resources identified in the surveys.

**Response:**

RSPP will not use any non-licensed, non-commercial soil borrow or disposal sites because there are no proposed fill disposal or fill procurement sites. The earthwork on site is balanced.

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**DR-CUL-95**

**Information Required:**

Please have a qualified archaeologist survey these sites and record on Department of Parks and Recreation (DPR) 523 forms any cultural resources that are identified.

**Response:**

The RSPP will not use any non-licensed, non-commercial soil borrow or disposal sites because there are no proposed fill disposal or fill procurement sites.

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**DR-CUL-96**

**Information Required:**

Please submit to staff, under confidential cover, a report on the methods and results of these surveys, with recommendations for the treatment of any cultural resources identified in the surveys.

**Response:**

The RSPP will not use any non-licensed, non-commercial soil borrow or disposal sites because there are no proposed fill disposal or fill procurement sites.

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**DR-CUL-97**

**Information Required:**

Please provide the length, width, and depth of each off-site surface water diversion channel, of the on-site detention pond, and of each on-site swale.

**Response:**

No response required under Approach 3.

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**DR-CUL-98**

**Information Required:**

Please provide a map, or series of maps, at a scale of 1"=500' showing all of the off- and on-site drainage features, labeled for easy reference to the above dimension data.

**Response:**

No response required under Approach 3.

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**DR-CUL-99**

**Information Required:**

Please provide a copy of the geotechnical report for the proposed project when it becomes available.

**Response:**

A copy of the preliminary geotechnical report was provided as Appendix B to the Application for Certification, submitted to the CEC on September 1, 2009. A final geotechnical report will be likely provided to the CEC in late spring/early summer of 2010.

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**DR-CUL-100**

**Information Required:**

Please obtain the services of a professional in geoarchaeology: a person who, at a minimum, meets the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology, as published in Title 36, Code of Federal Regulations, part 61, and has completed graduate-level coursework in geoarchaeology, physical geography, geomorphology, or Quaternary science, or who has education and experience acceptable to staff. Please submit the resume of the proposed geoarchaeologist for staff review and approval.

**Response:**

Please see the resume for Matthew Steinkamp, geoarchaeologist, provided as Attachment DR-CR-100.

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**DR-CUL-101**

**Information Required:**

Please have the approved geoarchaeologist provide a discussion, based on the available Quaternary science and geoarchaeological literature, of the historical geomorphology of the proposed project's APE, including:

- a) A description of the development of the landforms, with dates, focused on the character of the depositional regime of each landform from the Late Pleistocene epoch to the present;
- b) Data on the geomorphology, sedimentology, pedology, hydrology, and stratigraphy of the APE, and the near vicinity; and
- c) The relationship of landform development to the potential in the APE for buried archaeological deposits.

**Response:**

Please see Geoarchaeology Monitoring Report provided as Attachment DR-CR-101 and submitted under confidential cover as requested by the CEC.

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**DR-CUL-102**

**Information Required:**

Please have the approved geoarchaeologist produce a map or maps of the landforms present in the project area at a scale of not less than 1:24,000; the data sources for the maps may be any combination of published maps and/or satellite or aerial imagery that has been subject to field verification, and/or the result of field mapping efforts; the maps should overlay the project APE on the landform data. Please also provide the metadata for each overlay used.

**Response:**

Please see Geoarchaeology Monitoring Report provided as Attachment DR-CR-101 and submitted under confidential cover as requested by the CEC.

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**DR-CUL-103**

**Information Required:**

Absent sufficient technical literature pertinent to the reconstruction of the historical geomorphology of the project APE, and absent sufficient field data to elucidate landform relationships, please have the approved geoarchaeologist design a primary geoarchaeological field study of the project APE, submit a research plan for staff approval, and conduct the approved research. The purpose of the study is to facilitate staff's assessment of the likelihood of the presence of subsurface components for previously known or found surface archaeological deposits and of buried archaeological deposits in the project's APE. The primary study should, at a minimum, include the following elements:

- a) A subsurface sampling strategy to document the landform stratigraphy not revealed in natural exposures;
- b) Data collection necessary for determinations of the physical character, the ages, and the depositional rates of the various sedimentary deposits and paleosols that may be beneath the surface of the landforms in the project APE, to the proposed maximum depth of ground disturbance. Data collection at each sampling locale should include a measured profile drawing and a profile photograph (with a metric scale), and the screening of a small sample (three 5-gallon buckets) of sediment from the major sedimentary units in each profile through ¼- inch mesh hardware cloth. Data collection should also include the collection and assaying of enough soil humate or other organic samples to reliably radiocarbon date a master stratigraphic column for each sampled landform; and
- c) An analysis of the collected field data and an assessment, based on those data, of the likelihood of the presence of subsurface components for previously known or found surface archaeological deposits and of buried archaeological deposits in the project APE, and, to the extent possible, the likely age and character of such deposits.
- d) Use any natural exposures that reveal aspects of the stratigraphy of the portions of the landforms in the project APE;

**Response:**

Please see Geoarchaeology Monitoring Report, provided as Attachment DR-CR-101 and submitted under confidential cover as requested by the CEC.

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**DR-CUL-104**

**Information Required:**

Please have the approved geoarchaeologist prepare a report of the primary field study and submit it to staff under confidential cover.

**Response:**

Please see Geoarchaeology Monitoring Report, provided as Attachment DR-CR-101 and submitted under confidential cover as requested by the CEC.

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**DR-CUL-105**

**Information Required:**

Please provide to staff a series of scaled and dimensioned plan-and-profile views of the proposed project's (and alternative locations') impact blocks.

**Response:**

The response to this Data Request will be submitted to the CEC by February 20, 2010.

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**DR-CUL-106**

**Information Required:**

Please explicitly discuss the efficacy of modeling the potential archaeological characteristics and spatial distribution of at-this-time unknown Native American traditional use areas on the basis of available ethnographic information and theoretical principles of ethnogeography.

**Response:**

The response to this Data Request will be submitted by February 10, 2010.

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**DR-CUL-107**

**Information Required:**

If reasonably practicable, please develop such a model and submit for staff review and approval a research plan for the field verification in the APE of the model's predictions and recordation of identified traditional use areas.

**Response:**

The response to this Data Request will be submitted to the CEC by February 20, 2010.

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**DR-CUL-108**

**Information Required:**

Please implement the staff-approved plan and provide to staff a report on the results and a comprehensive discussion of the traditional use areas in and adjacent to the project APE that may be subject to the visual impact of the construction, operation, and maintenance of the proposed project (e. g., landforms in sight of the APE on which sacred or other traditional activities took place). Please include any additional DPR 523 site forms in an appendix.

**Response:**

The response to this Data Request will be submitted to the CEC by February 20, 2010.

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**DR-CUL-109**

**Information Required:**

Please provide a simulation (three-dimensional view) of the proposed power plant in the surrounding landscape, as seen from the following UTM locations in the El Paso Mountains:

Note: the locations below are not known locations of features sacred to Native Americans, but were chosen by staff as possible vantage points from which the plant site would be visible from the mountains.

- a) Zone 11 E430160/N3933940
- b) Zone 11 E430714/N3934268
- c) Zone 11 E428660/N3931024
- d) Zone 11 E427744/N3931690
- e) Zone 11 E428488/N3930238
- f) Zone 11 E430083/N3926845

**Response:**

The response to this Data Request will be submitted to the CEC by February 10, 2010.

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**DR-CUL-110**

**Information Required:**

Please conduct a Bureau of Land Management (BLM) class III pedestrian archaeological survey and a built-environment survey of the entire BLM-authorized ROW north of Brown Road.

**Response:**

Class III archaeological surveys and built environment surveys of the entire BLM-authorized right of way (ROW) north of Brown Road are expected to begin in early February 2010, with results to be provided under confidential cover to staff and BLM in June 2010.

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**DR-CUL-111**

**Information Required:**

Please complete DPR 523 forms for additional identified sites and make a recommendation on the NRHP and CRHR eligibility of each additional site.

**Response:**

Class III archaeological surveys and built environment surveys of the entire BLM-authorized ROW north of Brown Road are expected to begin in early February 2010, with results, including DPR 523 forms, to be provided under confidential cover to staff and BLM in June 2010.

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**Response Date: January 25, 2010**

**DR-CUL-112**

**Information Required:**

Please provide to staff a survey report for the additionally surveyed area and copies of the additional DPR 523 forms.

**Response:**

Class III archaeological surveys and built environment surveys the entire BLM-authorized ROW north of Brown Road are expected to begin in early February 2010, with results in a survey report of copies of DPR 523 forms to be provided under confidential cover to staff and BLM in June 2010.

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**DR-CUL-113**

**Information Required:**

For any alternative site locations not on BLM lands (to be identified at a later date by staff), please provide to staff, under confidential cover, the following:

- a) Copies of county records of any mines located on the alternative site locations;
- b) Copies of DPR 523 site forms for all previously known cultural resources from California Historical Resources Information System (CHRIS) record searches, for the alternative locations, out to 1.0 mile beyond the sites' and associated linear facility corridors' boundaries;
- c) Copies of CHRIS reports of previous archaeological excavations and architectural surveys conducted within the boundaries of the alternative sites and their linear facility corridors;
- d) A copy of the results of the Native American Heritage Commission's (NAHC) sacred lands database search for each alternative location;
- e) Copies of all letters sent to and received from Native Americans identified by the NAHC as interested in development at each alternative location;
- f) A consultation with local historical societies and museums to establish the background history of the alternative project site locations;
- g) An examination of historic maps to identify former and extant buildings and structures, including trails, roads, and other infrastructure, aged 45 years or older, for each alternative location;
- h) A map at a scale of 1:24,000 depicting the locations of all previously known and map-identified cultural resources for each alternative location; and
- i) A discussion of the comparative advantages and disadvantages of the proposed project and each alternative location, with respect to cultural resources.

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**Response:**

Records searches have been completed for the Garlock Road Alternative. The results of this Class I record searches will be submitted on February 12, 2010. Letters to the Native American Heritage Commission (NAHC) have been submitted.

Material to be provided under confidential cover from the record searches include: (1) copies of DPR 523 site forms for all previously documented cultural resources from the California Historical Resources Information System (CHRIS) record searches and from any BLM records within a one-mile radius around the boundaries of the sites and associated linear facility corridors; (2) copies of reports filed with CHRIS of previous archaeological investigations and architectural surveys conducted within the boundaries of the alternative sites and their linear facility corridors; (3) a copy of the results of the NAHC's sacred lands database search for each alternative location; and (4) copies of all letters sent to and received from the NAHC and those Native Americans identified by the NAHC as potentially interested in development at each alternative location.

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**DR-CUL-114**

**Information Required:**

If the applicant has analyzed other alternatives, unique to the proposed project, please provide to staff the above requested information for each additional alternative.

**Response:**

No other alternatives have been analyzed for cultural resources at the level specified in DR-CR-113.

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**DR-CUL-115**

**Information Required:**

Please provide a definition of the archaeological surface APE for the proposed project, identifying the areas included in it.

**Response:**

The archaeological surface Area of Potential Effects (APE) is defined as the extent of the reconfigured Project plant site disturbance area and disturbance areas associated with any linear features such as transmission corridors. The RSPP APE consists of the Project site disturbance area and one water line, which total approximately 1,944 acres. Note that this acreage total is without the mandated CEC survey buffers, which add an additional 350 acres. The APE includes all or part of Township 27S and Range 39E, Sections 13, 14, 23, 24, 25, 26, 27, 34, 35, and 36; and Township 27S and Range 40E, Sections 17, 18, 19, 30, and 31. These sections are located in the Inyokern and Ridgecrest South 7.5" USGS topographic quadrangle maps.

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**DR-CUL-116**

**Information Required:**

Please provide a map at a scale of 1:24,000 depicting the final and definitive archaeological surface APE for the proposed project.

**Response:**

Please see attached non-confidential map, Figure DR CUL-116.

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**DR-CUL-117**

**Information Required:**

Please conduct archaeological testing on the nine subject sites according to the following procedures:

- a) Use an excavation unit 50 centimeters (cm) square, excavated using hand tools (trowels or shovel) in 10-cm arbitrary levels, unless natural stratigraphy becomes evident, to a depth of 50 cm, unless minimal or no cultural material is encountered below 30 cm, with screening of excavated material through 1/8" mesh and all objects remaining in the screen visually inspected before discarding.
- b) Standard professional archaeological excavation techniques and data recordation parameters must be observed, including an adequate digital photographic record of all excavations. CARIDAP (California Archaeological Resource Identification and Data Acquisition Program: Sparse Lithic Scatter Guidelines, February, 1988) methods and standards can be used as a base protocol for the three flake scatter sites. If problems arise during testing, then the consultant and BLM and Energy Commission cultural resources specialists will consult to resolve them and reach a consensus on how to proceed.
- c) Number and placement of test excavation units are as follows:
  - i. Site RS-19c is a single basalt metate with a white silicate flake located about 11 meters (m) from the milling stone. Four units will be excavated. One unit will be placed at the location of the metate, another unit will be centered on the flake, and a third unit will be subjectively placed within 5 m of the flake's location after that unit has been completed, thus using that result to guide the placement of the third unit. The fourth unit will be arbitrarily placed within a 5-m radius of the metate.
  - ii. Site RS-154 is a low-density flake scatter of approximately 22 silicate flakes in a 26-m-by-18-m area. Five units will be excavated over the breadth of the site's area, with one unit placed in the center of the site and the other four in each of the cardinal directions.
  - iii. Site RS-407 consists of two adjacent rock cairns that are not attributed to either prehistoric or historic-period origins. One excavation unit will be placed at each cairn, and only one quarter of the unit will be excavated, leaving three-quarters of the cairn undisturbed. To facilitate excavation, those rocks within the quarter being excavated will be moved out of the unit in the course of the excavation. A third unit will be randomly placed within a 5-m radius of the two cairns. If any unit should contain archaeological evidence, then two additional units will be subjectively placed within the 5-m radius.

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- iv. Site RS-409 consists of two metates, a metate fragment, and one obsidian flake located about 30 m from the other artifacts. Four units will be excavated. One unit will be placed at the location of the obsidian flake and another will be subjectively placed within a 5-m radius of it. A third unit will be placed within a 3-m radius of the two metates, with the fourth placed subjectively within a 5-m radius.
  - v. Site RS-410 is a low-density flake scatter of approximately seven flakes of mixed materials (obsidian, silicates, and fine-grained metavolcanics) within a 45-m-by-20-m area. Five units will be excavated over the breadth of the site's area, with one unit placed in the center of the site and the other four in each of the cardinal directions.
  - vi. Site RS-604 consists of a single metate with two adjacent metate fragments. Three units will be excavated. One unit will be placed within one meter of the metate, and another unit within one meter of the two fragments. The third unit will be subjectively placed within a ten meter radius of the metate. No site map has been prepared for this site, so one will be generated in the course of the work on this site.
  - vii. Site RS-720 was recorded as a groundstone scatter consisting of two manos and four metate fragments within a 16-m-by-12-m area. A field inspection of this site on November 4, 2009, identified a possible rock cairn and two metate fragments not previously noted by the applicant lying about 30 m southeast of the main concentration. The DPR 523 form for this site, including the site map, will be updated to include these additional features. A minimum of five units will be excavated. One will be placed within 1 m of the metate fragment cluster nearest the applicant's datum. A second unit will be within 1 m of the two metates recorded in the northeast sector of the site. The third unit will encompass a portion of the newly noted rock cairn. The fourth unit will be placed within a 3-m radius of the two newly discovered metate fragments, and a fifth unit will be placed subjectively based upon results of the previous units.
  - viii. Site RS-850 is a sparse flake scatter of four flakes within a 25-m-by-22-m area. Five units will be excavated over the breadth of the site's area, with one unit placed in the center of the site and the other four in each of the cardinal directions.
  - ix. Site RS-870 consists of groundstone artifacts with an associated flake scatter in a 14-m-by-8-m area. Four units will be excavated. One unit will be placed on the metate location, the second over the location of the silicate scraper, and the third will be placed adjacent to the recorded mano. Based on results obtained from the first three units, a fourth unit will be subjectively placed within a 5-m radius of the site center.
- d) Collect and catalogue all archaeological artifacts and retain representative samples for future analysis, as appropriate, of cultural deposits such as soil, ash, charcoal, and floral and faunal remains. The resulting collection, along with a legible photocopy of any notes generated and updated DPR 523 forms, will be delivered to the Maturango Museum for permanent curation.

**Response:**

No response required under Approach 3.

**RIDGECREST SOLAR POWER PROJECT (09-AFC-9)**  
**CEC STAFF DATA REQUEST NUMBERS 79 -118**

**Technical Area: Cultural Resources (AFC Section 5.4)**

**Response Date: January 25, 2010**

**DR-CUL-118**

**Information Required:**

After the completion of the testing and analyses, please provide to BLM and Energy Commission cultural resources specialists for review and approval a summary report of results and eligibility recommendations, with the updated DPR 523 forms included in an appendix.

**Response:**

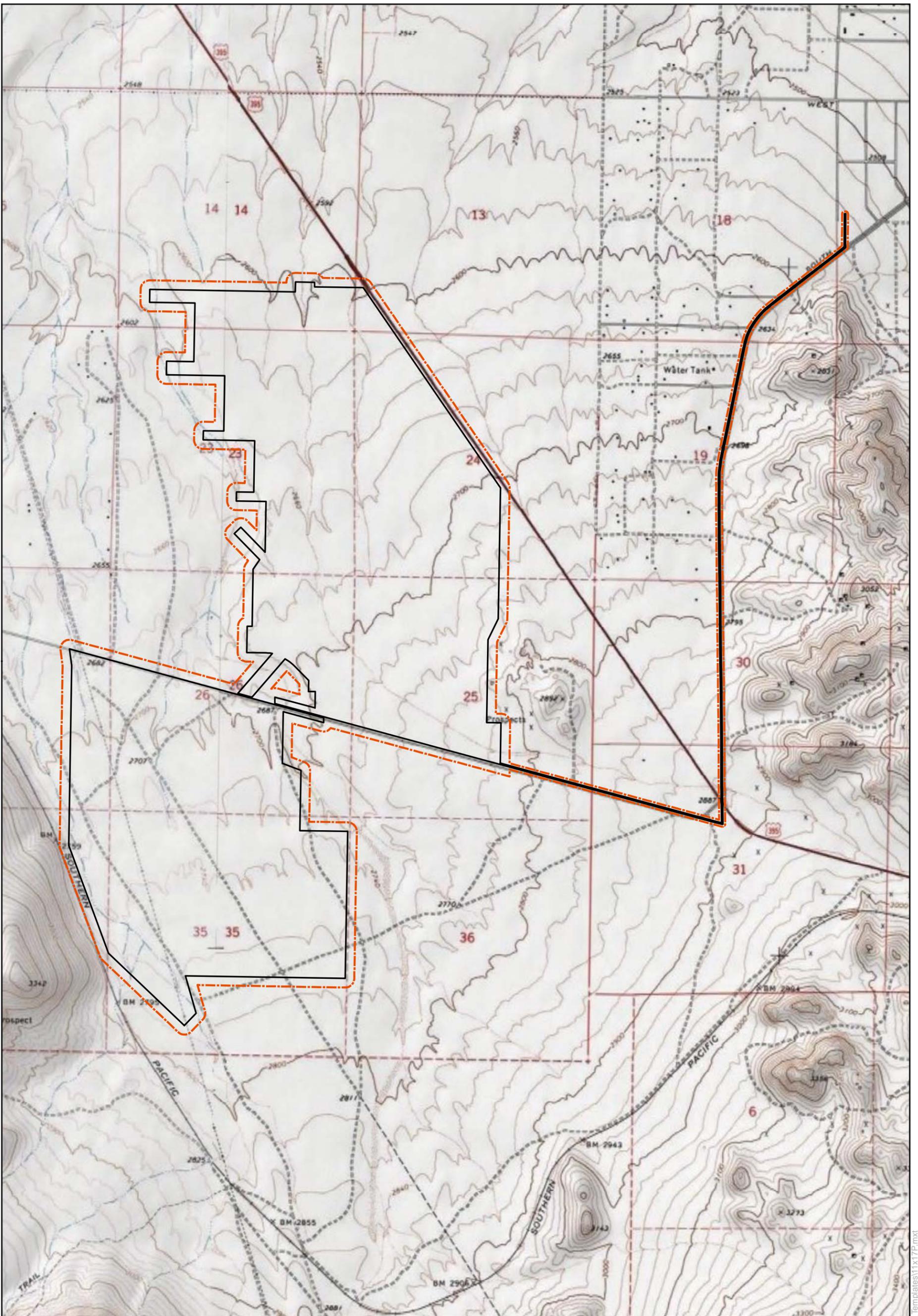
No response required under Approach 3.

**RIDGECREST SOLAR POWER PROJECT (09-AFC-9)**  
**CEC STAFF DATA REQUEST NUMBERS 79 -118**

**Technical Area: Cultural Resources (AFC Section 5.4)**

**Response Date: January 25, 2010**

**Attachment**  
**Cultural Figure**



**Legend**

- Archaeological Surface Area of Potential Effects (1,944 acres)
- CEC Buffers (Additional 350 acres)

Source: USGS 7.5" Quadrangles Inyokern (1972) and Ridgecrest South (1973); AECOM 2009

1 inch = 2,000 feet

0 2,000 4,000 Feet

**Class III Cultural Resources Report for the Ridgecrest Solar Power Project**

**DR-CR-116 Project Area of Potential Effects**

Date: January 2010

**RIDGECREST SOLAR POWER PROJECT (09-AFC-9)**  
**CEC STAFF DATA REQUEST NUMBERS 79 -118**

**Technical Area: Cultural Resources (AFC Section 5.4)**

**Response Date: January 25, 2010**

**Attachment DR-CULT-100**  
**Matthew Steinkamp Resume**

### Education

- M.S., Geology, Oregon State University, 2006
- B.A., Anthropology, University of Cincinnati, Ohio, 1986

### Registration / Certification

- NHPA Section 106 Compliance Certification. Instructor: Dr. Thomas King, 2007
- Geologist In Training (G.I.T) Oregon Board of Geologist Examiners, 2007
- NAUI certified diver, 1991

### Expertise

- Cultural resource survey design, testing, data recovery, monitoring, field methods.
- Stratigraphy and Sedimentology
- Geomorphological and geological analysis, core logging.
- Lithic analysis and raw material analysis
- Northwest, Basin and Range, Southwest, Northeast, Southeast, Midwest region prehistoric and historic archaeology.
- Micro-fossil analysis
- Underwater archaeology

### Selected Projects

- Geoarchaeologist, Ridgecrest Solar Power Project (RSPP), Kern County, California
- Geoarchaeologist, Palen Solar Power Project (PSPP), Riverside County, California
- Geoarchaeologist, Blythe Solar Power Project (BSPP), Riverside County, California
- Geoarchaeologist, Stockton Generation Power Project (SGEN), Stockton, California
- Archaeologist, Archaeological Testing at the Acorn and Emerson Lake Training Areas, Marine Air Force Training Command, Twentynine Palms, California

Matthew Steinkamp is a geologist, geomorphologist, geoarchaeologist, underwater archaeologist, and cultural resources project manager with more than 20 years of prehistoric and historic archaeological and historic preservation experience in all areas of the United States, Hawaiian Islands, Micronesia and East Africa. He joined SWCA in 2007 and is a geologist, geomorphologist and geoarchaeologist. He is responsible for assessing the effects of projects on historic and prehistoric resources on land and underwater, and conducting geomorphology and geoarchaeology studies by analyzing the bedrock geology, geomorphic processes and soils to determine archaeological site formation processes, integrity of deposits and presence or absence of sealed cultural remains in deep seated sedimentary environments.

Mr. Steinkamp's work experience has allowed him to acquire extensive knowledge in all phases of prehistoric and historic archaeology. He has worked on numerous cultural resource inventory projects, testing, construction monitoring, mitigation and data-recovery on sites in the Northwest, Southwest, Great Basin, Midwest, Northeast and Southeast United States, as well as the Hawaiian Islands and islands of Micronesia. He has extensive experience in geology and geomorphology such as piston and gravity coring of Lake Tanganyika, East Africa, core logging of mechanical drilling in the Northwest, as well as analyzing ocean drilling cores from the Pacific Ocean abyssal plain to develop a chronological and intensity sequence of large earthquakes along the Cascadia Subduction Zone and San Andreas Fault for the past 10,000 years.

Mr. Steinkamp also has extensive experience in laboratory methods, lithic analysis, micro-fossil analysis of cherts, flints and lacustrine sediments utilizing microscopy, raw material analysis, mineral separation, igneous and sedimentary petrography and petrology, field mapping of geological formations, invertebrate fossil analysis and flint-knapping.

Mr. Steinkamp has conducted cultural resource surveys for various state and federal agencies and private-sector clients. His experience has introduced him to numerous types of construction effects on cultural resources including gas and water-line construction, roadways, commercial buildings, parks, dam re-licensing, canals, coal mines, nuclear facilities, and logging operations. Mr. Steinkamp has co-authored numerous cultural resource inventory, testing and data recovery reports, and his publications include *Lacustrine Micro-Fossil Assemblage from Core NP04-KH3 from the Moba-Kalya Horst Region of Lake Tanganyika, East Africa, as a Biogeochemical Proxy for Late Pleistocene and Early Holocene Climate and Lake Levels* and *Diatoms are Cool, Yet Do They Indicate Dramatic Climate Shifts in the Holocene, Or Are They Just Full of Silica*. Mr. Steinkamp has presented at the University of Dar es Salaam Annual Science Conference in Dar es Salaam, Tanzania.

**RIDGECREST SOLAR POWER PROJECT (09-AFC-9)**  
**CEC STAFF DATA REQUEST NUMBERS 79 -118**

**Technical Area: Cultural Resources (AFC Section 5.4)**

**Response Date: January 25, 2010**

**Attachment DR-CULT-101**

**Geoarcheology Report**

**RIDGECREST SOLAR POWER PROJECT (09-AFC-9)**  
**CEC STAFF DATA REQUEST NUMBERS 79 -118**

**Technical Area: Cultural Resources (AFC Section 5.4)**

**Response Date: January 25, 2010**

**Geoaicheology Report provided to the CEC under confidential cover**