

# **Appendix 3**

# **Programmatic Agreement**

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**PROGRAMMATIC AGREEMENT  
AMONG THE  
BUREAU OF LAND MANAGEMENT-CALIFORNIA,  
THE CALIFORNIA ENERGY COMMISSION,  
CALICO SOLAR LLC, AND THE  
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,  
REGARDING THE CALICO SOLAR PROJECT,  
SAN BERNARDINO COUNTY, CALIFORNIA**

**TABLE OF CONTENTS**

**TABLE OF CONTENTS ..... 1**

**INTRODUCTION..... 3**

**STIPULATIONS..... 7**

**I. DEFINITIONS..... 7**

**II. AREA OF POTENTIAL EFFECTS ..... 9**

**III. IDENTIFICATION AND EVALUATION..... 11**

**IV. ASSESSMENT OF EFFECTS..... 13**

**V. TREATMENT AND MANAGEMENT OF HISTORIC PROPERTIES..... 15**

**VI. DISCOVERIES AND UNANTICIPATED EFFECTS..... 16**

**VII. TREATMENT OF HUMAN REMAINS OF NATIVE AMERICAN ORIGIN ..... 17**

**VIII. STANDARDS AND QUALIFICATIONS ..... 17**

**IX. REPORTING REQUIREMENTS ..... 18**

**X. IMPLEMENTATION OF THE UNDERTAKING ..... 19**

**XI. AMENDMENTS TO THE AGREEMENT..... 19**

**XII. DISPUTE RESOLUTION..... 20**

**XIII. TERMINATION ..... 20**

**XIV. ADDITION/WITHDRAWAL OF PARTIES FROM/TO THE AGREEMENT ... 21**

**XV. DURATION OF THIS AGREEMENT ..... 21**

**XVI. EFFECTIVE DATE..... 22**

**SIGNATORY PARTIES ..... 23**

<b>INVITED SIGNATORY PARTIES.....</b>	<b>24</b>
<b>CONCURRING PARTIES .....</b>	<b>27</b>
<b>APPENDIX A: IDENTIFICATION AND EVALUATION.....</b>	<b>33</b>
I.    IDENTIFICATION .....	33
II.   EVALUATION.....	33
<b>APPENDIX B: HISTORIC PROPERTIES TREATMENT PLAN(S).....</b>	<b>35</b>
I.    HISTORIC PROPERTIES TREATMENT PLAN(S) provide for the resolution or mitigation of effects to historic properties as a result of the project. ....	35
II.   COORDINATION WITH ENERGY COMMISSION MEASURES UNDER CEQA .....	36
III.  PERFORMANCE STANDARDS FOR NHPA SECTION 106 AND CEQA MITIGATION .....	36
IV.   HISTORIC PROPERTY TREATMENT PLANS (HPTP).....	40
<b>APPENDIX C: HISTORIC PROPERTIES MANAGEMENT PLAN.....</b>	<b>41</b>
<b>APPENDIX D: PROJECT DESCRIPTION .....</b>	<b>42</b>
<b>APPENDIX E: PROJECT MAPS AND ILLUSTRATIONS .....</b>	<b>44</b>
Project Vicinity Map.....	45
Project Overview Map .....	46
Project Proposed Action/Area of Potential Effect Map .....	47
Photograph of SunCatcher Solar Dish Array .....	48
Illustrated Photograph of a SunCatcher Solar Dish Array .....	49
<b>APPENDIX F: SUMMARY OF CULTURAL RESOURCES INVESTIGATIONS .....</b>	<b>50</b>
<b>APPENDIX G: AGENCY FINDINGS AND DETERMINATIONS.....</b>	<b>52</b>
<b>APPENDIX H: DOCUMENTATION OF TRIBAL CONSULTATION .....</b>	<b>71</b>
Major Tribal Consultation Events and Contacts: January 2008 through April 2010.....	71
<b>APPENDIX I: EXAMPLE MONITORING AND DISCOVERY PLAN.....</b>	<b>77</b>
<b>APPENDIX J: EXAMPLE NAGPRA PLAN OF ACTION.....</b>	<b>123</b>

## **INTRODUCTION**

The purpose of this Programmatic Agreement (Agreement) is to provide the processes whereby the Bureau of Land Management (BLM), in consultation with the California State Historic Preservation Officer (SHPO), Advisory Council on Historic Preservation (ACHP), Indian Tribes and other consulting parties, take into account the effects of the Calico Solar LLC – Calico Solar Project on historic properties and provide the ACHP a reasonable opportunity to comment as required by Section 106 of the National Historic Preservation Act (Section 106). The California Energy Commission (Energy Commission) intends to use this Agreement to satisfy the requirements of the California Environmental Quality Act.

The BLM, in consultation with the consulting parties to this Agreement, will consider and incorporate within the Section 106 consultation process the performance standards (desired future condition), range of mitigation measures and commitment to mitigate, and monitoring requirements of the Energy Commission’s Staff Assessment for the Calico Solar LLC - Calico Solar Project (Application for Certification 08-AFC-13). The BLM and the Energy Commission will endeavor to make the historic properties treatment and management provisions of this Agreement as it applies to the project as consistent as possible with the objectives and terms of the Staff Assessment within the context of the consultation process required by Section 106.

Government agencies, consulting parties, and the public identified in the scoping and public notification process for the Staff Assessment and Environmental Impact Statement were advised in the Supplemental Staff Assessment and Final Environmental Impact Statement (FEIS) that historic properties associated with the Calico Solar LLC – Calico Solar Project would be treated consistent with the mitigation measures or performance standards identified in the Staff Assessment and adopted by the Energy Commission, and consistent with the stipulations of this Agreement. A proposed final draft of this Agreement was circulated for public comment as an attachment to the FEIS. The Signatories have consulted with the Invited Signatories, Concurring Parties and Tribes on this Agreement, and have taken into consideration the views and comments received regarding the draft Agreement in preparing this final Agreement.

Appendices to this Agreement provide additional information about the Project or guidance. The Appendices can also include examples or drafts of planning documents that may be required and tiered from this Agreement and for which Section 106 consultation will continue to develop a final version.

**PROGRAMMATIC AGREEMENT  
AMONG THE  
BUREAU OF LAND MANAGEMENT-CALIFORNIA,  
THE CALIFORNIA ENERGY COMMISSION,  
CALICO SOLAR, LLC, AND THE  
CALIFORNIA STATE HISTORIC PRESERVATION OFFICER,  
REGARDING THE CALICO SOLAR PROJECT,  
SAN BERNARDINO COUNTY, CALIFORNIA**

**WHEREAS**, the Calico Solar LLC (Applicant) has applied for a right of way (ROW) grant on public lands managed by the Bureau of Land Management (BLM) and has submitted a Plan of Development (POD) to construct, operate and maintain a solar energy electrical generating plant (hereinafter referred to as the Calico Solar Project), including construction of solar dish power control units (SunCatchers), a 230 kilovolt (kV) transmission line, a water pipeline, paved arterial roads, unpaved perimeter access and maintenance roads, laydown and staging areas, and support facilities and infrastructure which are more fully described in Appendix D: Project Description and illustrated in Appendix E: Project Maps and Illustrations attached hereto and incorporated by this reference; and

**WHEREAS**, the BLM has determined that since it requires the issuance of a ROW to the Calico Solar LLC, in accordance with the Federal Land Policy and Management Act (FLPMA) (Public Law 940-579; 43 U.S.C 1701), the Project is an Undertaking subject to Section 106 of the National Historic Preservation Act (NHPA), 16 USC 470(f), and its implementing regulations under 36 CFR Part 800 (2004) (Section 106); and

**WHEREAS**, in August 2005, the United States Congress enacted the Energy Policy Act of 2005 (Public Law 109-58). In Section 211 of that Act, Congress directed that the Secretary of the Interior (“Secretary”) should, before the end of the 10-year period beginning on the date of enactment of the Act, seek to have approved non-hydropower renewable energy projects located on the public lands with a generation capacity of at least 10,000 megawatts of electricity; and

**WHEREAS**, by Secretarial Order No. 3285 issued March 11, 2009, the Secretary stated as policy that encouraging the production, development, and delivery of renewable energy is one of the Department of Interior’s (DOI) highest priorities and that agencies and bureaus within the DOI will work collaboratively with each other, and with other federal agencies, departments, states, local communities, and private landowners to encourage the timely and responsible development of renewable energy and associated transmission while protecting and enhancing the Nation’s water, wildlife, and other natural resources; and

**WHEREAS**, the BLM, in consultation with the California State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP), pursuant to 36 C.F.R. 800.4(b)(2), seek to phase final identification and evaluation of historic properties for the project pursuant to 36 C.F.R. 800.4(b)(2) because the alternatives under consideration consist of large

land areas. In accordance with the requirements of 36 C.F.R. 800.4(b)(2), the BLM is preparing this Agreement to set forth the process for completing phased compliance with Section 106 of the NHPA; and

**WHEREAS**, the BLM has consulted with the SHPO and the ACHP, pursuant to 36 C.F.R. 800.14(b)(3) and following the procedures outlined at 36 C.F.R. 800.6, and are in the process of considering alternatives for the Project that have the potential to adversely affect historic properties and may reach a decision regarding approval of the ROW for the Project before the effects of the Project's implementation on historic properties have been fully determined, the BLM chooses to continue its assessment of the undertaking's potential adverse effect and resolve any such effect through the implementation of this Agreement; and

**WHEREAS**, in accordance with regulations at 36 CFR 800.14(b)(3) BLM has notified and invited the ACHP per 36 CFR 800.6(a)(1)(C) to participate in consultation to resolve the potential effects of the Undertaking on Historic Properties, and as per their letter dated April 12, 2010, the ACHP has elected not to participate in this Agreement; and

**WHEREAS**, the California Energy Commission (Energy Commission) may certify the Project located on both public and private lands pursuant to Section 25519, subsection (c) of California's Warren-Alquist Act of 1974 and, for the purposes of consistency, proposes to manage all historical resources in accordance with the stipulations of this Agreement, and has participated in this consultation and is an Invited Signatory to this Agreement; and

**WHEREAS**, the BLM has prepared the *Final Environmental Impact Statement Calico Solar Project (August 2010)* and the Energy Commission has prepared the *Supplemental Staff Assessment Calico Solar Project, Application for Certification (08-AFC-13) San Bernardino County (2010)* to identify the Project alternatives for purposes of the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), and have comparatively examined the relative effects of the alternatives on known historic properties; and

**WHEREAS**, the Applicant has participated in this consultation per 36 C.F.R. 800.2(c)(4) and, will be the entity to whom the BLM may grant a ROW related to Project activities, and has the responsibility for carrying out the specific terms of this Agreement under the oversight of the BLM, and therefore is an Invited Signatory to this Agreement; and

**WHEREAS**, pursuant to the special relationship between the Federal government and Indian tribes, and Section 101(d)(6)(B) of the NHPA, 36 C.F.R. 800.2(c)(2)(ii), the American Indian Religious Freedom Act (AIRFA), Executive Order 13175, and Section 3(c) of the Native American Graves Protection and Repatriation Act (NAGPRA), the BLM is responsible for government-to-government consultation with federally recognized Indian Tribes and is the lead federal agency for all Native American consultation and coordination; and

**WHEREAS**, the BLM has formally notified and invited Federally recognized tribes including the Fort Mojave Indian Tribe, the San Manuel Band of Mission Indians, the Twentynine Palms

Band of Mission Indians, and the Chemehuevi Reservation (Tribes) to consult on this Project and participate in this Agreement as a Concurring Party. BLM has documented its efforts to consult with the Tribes and a summary is provided in Appendix H to this Agreement; and

**WHEREAS**, through consultation, Tribes have expressed their views and concerns about the importance and sensitivity of specific cultural resources to which they attach religious and cultural significance. Tribes have expressed the connection of these resources to the broader cultural landscape within and near the Project area; and

**WHEREAS**, the BLM shall continue to consult with the Tribes throughout the implementation of this Agreement regarding the adverse effects to historic properties to which they attach religious and cultural significance. BLM will carry out its responsibilities to consult with Tribes that request such consultation with the further understanding that, notwithstanding any decision by these Tribes to decline concurrence, BLM shall continue to consult with these Tribes throughout the implementation of this Agreement; and

**WHEREAS**, the California Unions for Reliable Energy has been invited to consult on this undertaking and this Agreement, has been afforded consulting party status pursuant to 36 C.F.R. 800.3(f)(4), and has been invited to be a Concurring Party to this Agreement. The BLM will continue to consult with any consulting party that requests such consultation regardless of their decision to concur by signature in this Agreement. BLM shall continue to consult throughout the implementation of this Agreement, however only consulting parties that have concurred in this Agreement by signature shall have rights with regard to implementation of the terms of this Agreement; and

**WHEREAS**, the BLM, in coordination with the Energy Commission, has authorized the Applicant to conduct specific identification efforts for this Project including a review of the existing literature and records, cultural resources surveys, ethnographic studies, and geomorphological studies to identify historic properties that might be located within the APE; and

**WHEREAS**, the BLM has defined the APE in which the Project may directly or indirectly adversely affect historic properties pursuant to the definition of APE at 36 C.F.R. 800.16(d). The basis of the APE is described in greater detail in Stipulation II of this Agreement; and

**WHEREAS**, the Applicant has retained an archaeological consultant to complete all of the investigations necessary to identify and evaluate the National Register of Historic Places (NRHP) eligibility for cultural resources located within the APE for both direct and indirect effects. The consultant has completed a review of the existing historic, archaeological and ethnographic literature and records to ascertain the presence of known and recorded cultural resources in the APE and buffered study area; conducted an intensive field survey for 8,230 acres of land, including all of the lands identified in APE for direct effects for all Project alternatives; and completed intensive field surveys for alternatives on lands that are no longer part of the Project. The consultant has also submitted a cultural resources inventory report (*Calico Solar Final Class III Cultural Resources Technical Report*, prepared by URS Corporation, July 2010)

that presents the results of identification efforts and was submitted to the BLM and Energy Commission. The BLM has provided the report to the interested parties and Tribes for review and comment; and

**NOW, THEREFORE**, the BLM and SHPO (hereinafter “Signatories”) and the Energy Commission and Applicant (hereinafter “Invited Signatories”), agree that the Project shall be implemented in accordance with the following stipulations in order to take into account the adverse effect of the undertaking on historic properties, resolve such adverse effects through the process set forth in this Agreement, and provide the ACHP with a reasonable opportunity to comment in compliance with Section 106.

## STIPULATIONS

The BLM shall ensure that the following measures are implemented:

### I. DEFINITIONS

The definitions found at 36 C.F.R. 800.16 and in this section apply throughout this Agreement except where another definition is offered in this Agreement.

- a) **Area of Potential Effect.** The APE is defined as the total geographic area or areas within which the Project may directly or indirectly cause alterations in the character or use of historic properties per 36 C.F.R. 800.16(d). The APE is influenced by the scale and nature of an undertaking and includes those areas which could be affected by a project prior to, during and after construction.
- b) **Concurring Parties.** Collectively refers to consulting parties with a demonstrated interest in the Project, who agree, through their signature, with the terms of this Agreement. Concurring Parties may propose amendments to this Agreement.
- c) **Cultural Resource.** A cultural resource is an object or definite location of human activity, occupation, use, or significance identifiable through field inventory, historical documentation, or oral evidence. Cultural resources are prehistoric, historic, archaeological, or architectural sites, structures, buildings, places, or objects and locations of traditional cultural or religious importance to specified social and/or culture groups. Cultural resources include the entire spectrum of objects and places, from artifacts to cultural landscapes, without regard to eligibility for inclusion on the National Register of Historic Places (NRHP) or California Register of Historical Resources (CRHR).
- d) **Consulting Parties.** Collectively refers to the Signatories, Invited Signatories and Concurring Parties who have signed this Agreement.
- e) **Historic Properties.** Properties (cultural resources) that are included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior and per the NRHP eligibility criteria at 36 CFR60.4 and may include any prehistoric or historic district, site, building, structure, traditional cultural property or object. This term includes artifacts,

records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization that meet the NRHP criteria. The term “eligible for inclusion in the NRHP” refers both to properties formally determined as such in accordance with regulations of the Secretary of the Interior and all other properties that meet the NRHP criteria.

- f) **Historical Resources.** Historical resources are cultural resources that meet the criteria for listing on the CRHR as provided at California Code of Regulations Title 14, Chapter 11.5, Section 4850 and may include, but are not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.
- g) **Invited Signatories.** Invited Signatories are parties that have specific responsibilities as defined in this Agreement. Those Invited Signatories who actually sign this Agreement have the same rights with regard to seeking amendment or termination of this Agreement as the Signatory Parties, but whose signatures are not required for execution of the Agreement. Invited Signatories to this Agreement are the Energy Commission and Applicant.
- h) **Lands Administered by the U.S. Department of Interior, Bureau of Land Management (BLM)** means any federal lands under the administrative authority of the BLM.
- i) **Literature Review.** A literature review is one component of a BLM class I inventory, as defined in BLM Manual Guidance 8100.21(A)(1), and is a professionally prepared study that includes a compilation and analysis of all reasonably available cultural resource data and literature, and a management-focused, interpretive, narrative overview, and synthesis of the data. The overview may also define regional research questions and treatment options.
- j) **Records Search.** A records search is one component of a BLM class I inventory and an important element of a literature review. A records search is the process of obtaining existing cultural resource data from published and unpublished documents, BLM cultural resource inventory records, institutional site files, State and national registers, interviews, and other information sources.
- k) **Signatories.** Signatories are parties that have the sole authority to execute, amend or terminate this Agreement. Signatories to this Agreement are the BLM and SHPO.
- l) **Traditional Cultural Property.** A traditional cultural property is defined generally as a property that is important to a living group or community because of its association with cultural practices or beliefs that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. It is a place, such as a traditional gathering area, prayer site, or sacred/ceremonial location, that may figure in important community traditions. These places may or may not contain features, artifacts, or physical evidence, and are usually identified through consultation. A traditional cultural property may be eligible for inclusion in the NRHP and the CRHR.
- m) **Tribal Organizations.** The non Federally recognized Indian tribes and Native American organizations that BLM is consulting with on this Project.

- n) **Tribes.** The federally recognized Indian Tribes that BLM is consulting with on this Project.
- o) **Windshield Survey.** A windshield survey is the driving or walking of surveyors along streets and roads of a community in order to observe and record the buildings, structures, and landscape characteristics seen from those vantage points. A windshield survey is a method commonly utilized in reconnaissance surveys to identify built-environment resources, such as buildings, objects, and structures.

## II. AREA OF POTENTIAL EFFECTS

- a) The BLM has defined the APE for the Project based on both the direct and indirect impacts, to be a 15 mile radius around the block area of the Project. Below is a discussion about the APE and the methodology used to so define, and the survey methodology utilized within each APE. See Appendix E for APE map and Project illustrations.
  - i) The area within which historic properties could sustain direct effects as a result of the Project is defined to include:
    - (1) The block area of installation of the proposed Phase I and Phase II components of the Project, which includes approximately 6,215 acres of public lands. The area is generally bounded by the Cady Mountains to the north, Interstate 40 to south, undeveloped BLM land to the west, and the Southern California Edison 230-Kilovolt north and south transmission lines to the east. Per Energy Commission requirements, a 200-foot wide buffer around the APE was included in the survey for cultural resources within the block area. This buffer is deemed sufficient to include any Project-related activity conducted near the edge of the Project footprint.
    - (2) All linear elements of the Project including:
      - (a) A 10-foot wide ROW for a water supply line, extending for approximately .3 miles from private land owned by the Applicant to the main services complex. This buried pipeline will supply water from the Lavic Groundwater Basin via a well on private land owned by the Applicant. The pipeline will be buried 30 inches below grade in the shoulder of the Project access road. A survey corridor for cultural resources for this linear element was established as a 75-foot wide buffer on either side of the center line (150-foot wide corridor) to allow for changes in the ROW to avoid cultural resources.
      - (b) A 30-foot wide ROW for temporary or permanent access roads required outside the plant footprint. The survey corridor for cultural resources for this linear element included a 50-foot wide buffer on either side of the center line (100-foot wide corridor) to allow for changes in the ROW to avoid cultural resources.

- (c) A ROW for the 230 kV transmission line is approximately 100-foot wide and .4 miles long and extends from the Project area to the Southern California Edison (SCE) Pisgah Substation. The survey corridor for cultural resources for this linear element was established as a 150-foot wide buffer on either side of the center line (300-foot wide corridor) to allow for changes in the ROW to avoid cultural resources.
- ii) The area within which historic properties could sustain indirect effects, including visual, auditory, atmospheric, and contextual, as a result of the Project includes:
    - (1) Historic properties or cultural resources within a 15 mile radius of the direct effects APE that are identified through a review of existing literature and records search, information or records on file with the BLM or at the San Bernardino Archaeological Information Center (SBAIC), interviews or discussions with local professional or historical societies and local experts in history or archaeology. For example, specific areas of concern or cultural resources that were identified include:
      - (a) Historic Route 66 Highway
      - (b) Historic properties or cultural resources identified through archaeological or other field investigations for this Project that, as a result of Project redesign to avoid direct effects to cultural resources, are no longer within the Project area.
    - (2) Historic properties or cultural resources within a 15 mile radius of the direct effects APE that are included in the Native American Heritage Commission Sacred Lands Files, identified through a literature review or records search, or identified by a Tribe or Tribal organization, through consultation as having religious or cultural significance. Specific places or cultural resources that have been identified through tribal consultation include:
    - (3) Historic properties or cultural resources within a 15 mile radius of the direct effects APE that have been identified by a consulting party, organization, governmental entity, or individual through consultation or the public commenting processes as having significance or being a resource of concern. Areas identified through consultation to date include:
      - (a) Historic Route 66 Highway.
    - (4) Built-environment resources located within one-half mile of the Project footprint,
      - (a) whose historic settings could be adversely affected. Specific areas of concern or cultural resources have been identified both south and north of the Project location and include:

- (i) Historic Route 66 Highway
    - (ii) Old National Trails Highway
  - (b) On private property, historic properties or cultural resources within one-half mile of the direct effects APE that are identified through surveys, where access was granted, and windshield surveys, where access was not granted.
- b) The APE, as currently defined, encompasses an area sufficient to accommodate all of the proposed and alternative Project components under consideration as of the date of the execution of this Agreement. If it is determined in the future that the Project may directly or indirectly affect historic properties located outside the currently defined APE, then the BLM, in consultation with the Signatories, Invited Signatories, and Concurring Parties, shall modify the APE using the following process:
- i) Any consulting party to this Agreement may propose that the APE established herein be modified. The BLM shall notify the other Signatories, Invited Signatories, and Concurring Parties of the proposal and consult for no more than 15 days to reach agreement on the proposal.
  - ii) If the Signatories agree to the proposal, then the BLM will prepare a description and a map of the modification to which the Signatories agree. The BLM will keep copies of the description and the map on file for its administrative record and distribute copies of each to the other Signatories, Invited Signatories and Concurring Parties within 30 days of the day upon which agreement was reached.
  - iii) Upon agreeing to a modification to the APE that adds a new geographic area, the BLM shall follow the processes set forth in Stipulation III to identify and evaluate historic properties in the new APE, assess the effects of the undertaking on any historic properties in the new APE, and provide for the resolution of any adverse effects to such properties, known or subsequently discovered, per Stipulations IV and V.
  - iv) If the Signatories cannot agree to a proposal for the modification of the APE, then they will resolve the dispute in accordance with Stipulation XII.

### **III. IDENTIFICATION AND EVALUATION**

- a) The BLM, in coordination with the Energy Commission, has authorized the Applicant to conduct specific identification efforts for this undertaking including, but not limited to, a literature review, records search, cultural resources surveys, ethnographic studies, and geo-morphological studies to identify historic properties that might be located within applicable specific APE.

- i) The Applicant has prepared and submitted a cultural resources inventory report (URS June 2010) to the BLM and the Energy Commission that presents the results of the Applicant's identification efforts. The report is currently under review by the BLM and Energy Commission to assess whether the report conforms with the field methodology and site description template required under BLM Fieldwork Authorization CA-680-08-26 and Fieldwork Authorization CA-680-10-05 and Energy Commission Data Requests for Docket number 08-AFC-13.
  - ii) The BLM, in consultation with the Energy Commission, may require additional field investigations to be conducted by the Applicant to ensure the accuracy of site recordation and to provide additional information to support site evaluations and the assessment of effects. However, the BLM and Energy Commission, separately or together, have the right and the discretion, under this Agreement, to request additional field studies.
  - iii) The BLM is consulting with interested Tribes, Tribal organizations or tribal individuals regarding the identification of historic properties within the APE to which they attach religious or cultural significance and shall respond to any additional request to consult with Tribes, Tribal organizations or tribal individuals.
- b) The BLM shall make determinations of eligibility consistent with 36 C.F.R. 800.4 prior to the Record of Decision (ROD) to the extent practicable, and will make any remaining determinations as soon as possible afterwards, on those cultural resources within the APE, and make the agency's determinations available to the consulting parties, Tribes and the public for a 45 day review and comment period.
- i) The BLM will respond to any request for consultation on its determinations from a consulting party to this Agreement or a Tribe.
  - ii) A consulting party may provide its comments directly to the SHPO with a copy to the BLM within the 45 day comment period.
  - iii) The BLM will forward to the SHPO all comments regarding its determinations received during the 45 day comment period.
  - iv) After the 45 day comment period, the BLM may request SHPO concurrence for those determinations and findings for which there is no disagreement.
    - (1) SHPO will have 15 days in which to comment.
    - (2) Should SHPO not comment, BLM shall document that SHPO has elected not to comment and may proceed in accordance with its proposed determinations.
    - (3) If the BLM and SHPO disagree on a determination, BLM shall seek a determination from the Keeper of the National Register.

- v) Where a consulting party or Tribe objects to the BLM’s determination for a specific cultural resource within the 45 day review period, the BLM shall consult with the objecting party and the SHPO regarding the nature of the objection and reconsider its determinations.
  - (1) If the objection is not resolved, the BLM shall further consult with the SHPO and follow the processes provided at 36 C.F.R. 800.4(c)(2).
  - (2) The BLM may proceed with determinations for all cultural resources not subject to objection.
- vi) The BLM and the Energy Commission shall coordinate to the extent feasible and practicable on determinations of eligibility for the NRHP and CRHR.
- vii) If adverse effects to a cultural resource can be avoided, the BLM may choose to prescribe avoidance without making an eligibility determination of that cultural resource.
- c) In only the following circumstances, the BLM may defer the final evaluation of significance of cultural resources
  - i) where BLM has determined significance is limited to scientific, prehistoric, historic or archaeological data and where testing or limited excavation is recommended to determine whether a site would be eligible under Criterion D for inclusion on the NRHP.
  - ii) where additional evaluation efforts are required to assess the scientific, prehistoric, historic or archaeological data values of a property, the BLM and Energy Commission shall ensure that such properties located within the APE are evaluated for the NRHP and CRHR pursuant to Stipulation III and the guidelines provided in Appendix A of this Agreement.

**IV. ASSESSMENT OF EFFECTS**

- a) The BLM shall make determinations of effect consistent with 36 C.F.R. 800.4(d) and identify the type of adverse effect for each affected property in accordance with the criteria established in 36 C.F.R. 800.5(a)(1) and (2)(i)-(vii) prior to the ROD to the extent practicable on those cultural resources within the APE that are listed on or determined eligible for the NRHP, and provide the SHPO, Tribes, and the consulting parties with the results of this finding.
- iii) The Applicant shall submit to the BLM:
  - (1) a list of the cultural resources that the Project appears likely to affect.

- (2) a list of the cultural resources that the Project has no potential to affect.
  - (3) a list of the cultural resources that the Applicant commits to avoiding through the implementation of formal avoidance measures.
  - (4) a list of the cultural resources that cannot be avoided and will need to be evaluated and/or treated by implementing the prescriptions of the Historic Properties Treatment Plan (HPTP) required in Stipulation V of the Agreement.
- b) The BLM shall issue a finding of effect, based on the BLM's own evaluation of the Applicant's analysis, and provide Tribes and consulting parties to this Agreement an opportunity to review the BLM's finding and the analysis to support its finding.
- i) The BLM shall attempt to make its determinations and findings to the extent possible in a single consolidated decision and may submit findings of effect to the SHPO concurrently with its determinations of eligibility per Stipulation III(b), otherwise, the consulting parties shall have 30 days to comment on BLM findings of effect.
  - ii) The BLM will forward to the SHPO all comments regarding its findings of effect received during the comment period.
  - iii) After the comment period, the BLM may request SHPO concurrence for those findings for which there is no disagreement.
    - (1) SHPO will have 15 days in which to comment.
    - (2) Should SHPO not comment, BLM shall document that SHPO has elected not to comment and may proceed in accordance with its proposed determinations.
    - (3) Should SHPO disagree with BLM's finding, they shall continue to consult to resolve the disagreement within a 30 day review period.
    - (4) If the SHPO and BLM are not able to resolve the disagreement within the review period, BLM will request ACHP review of the finding pursuant to 36 C.F.R. 800.5(c)(3)(i).
  - iv) Where a consulting party or Tribe objects to the BLM's findings, the BLM shall consult with the objecting party and the SHPO regarding the nature of the objection and reconsider its findings.
    - (1) If the objection is not resolved, the BLM shall further consult with the SHPO and follow the processes provided at Stipulation IV(b)(iii).
- c) The Applicant, at the direction of the BLM and Energy Commission, may prepare the analysis required above in phases that correspond to the proposed sequence of development for the Project or in phases for each block of 60 SunCatchers, provided that analyses are ultimately prepared for the entirety of the APE.

- d) If adverse effects to such cultural resources will not be avoided, the BLM must resolve the adverse effect by implementing the prescriptions of the HPTP. When developing these HPTPs, BLM does not need to consider those cultural resources that it has evaluated and determined are not eligible for inclusion in the NRHP consistent with the process under 36 C.F.R. 800.4.
- e) Where additional identification and evaluation efforts are required due to changes in the project and the APE, the BLM and Energy Commission shall ensure that cultural resources located within the APE are identified and evaluated for the NRHP and CRHR pursuant to Stipulation III of this Agreement.

## **V. TREATMENT AND MANAGEMENT OF HISTORIC PROPERTIES**

- a) BLM will ensure the resolution of identified adverse effects to historic properties through avoidance, minimization, or mitigation and shall be described in one or more HPTP(s) that shall be written and finalized as described below and included in Appendix B.
  - i) The BLM and Applicant, in consultation with the consulting parties and Tribes, shall develop a draft HPTP(s), prior to the ROD if feasible, or as soon as possible thereafter.
    - (1) Prior to the issuance of any Notice to Proceed by the BLM to initiate the Project or any component of it that may affect historic properties, the Applicant shall develop and submit to the BLM one or more HPTPs for the BLM's approval.
    - (2) The HPTP(s) will be implemented after the ROW is granted by the BLM and prior to the issuance of a Notice to Proceed for construction in those portions of the Project addressed by the HPTP. The process for developing the HPTPs is further described below in this stipulation.
    - (3) The BLM may authorize the phased implementation of the HPTP(s) (per Stipulation X), or if appropriate, the development of HPTPs for individual cultural resources, or HPTPs that are related to specific issues or geography.
  - ii) The BLM and Energy Commission, consistent with the guidelines provided in Appendix B(2), shall make every effort within the legal limits imposed on each party to incorporate into the Historic Properties Management Plan (HPMP) and any HPTP the intent of the treatment or mitigation measures in the Energy Commission's Conditions of Certification and BLM's ROD. The purpose of this effort is to evidence that due consideration of the intent inherent in the Energy Commission's Conditions of Certification were fully considered and incorporated when possible. If the BLM and Energy Commission cannot agree to proposed treatment measures, then they will resolve the dispute in accordance with Stipulation XII(c)(iii).
  - iii) The BLM shall submit the HPTP(s) to the consulting parties and Tribes for a 30-day review period. BLM will consider timely comments when finalizing the HPTP(s). A

consulting party may provide its comments directly to the SHPO with a copy to the BLM within the 30-day comment period. The BLM will forward to the SHPO all comments regarding the HPTP(s) received during the comment period.

- (1) Where an HPTP specifically addresses treatment for adverse effects to historic properties to which Tribes attach religious or cultural significance, the BLM shall submit the HPTP to the Tribes and seek their views and comments through consultation, regardless of the status of a Tribe as a Concurring party to this Agreement. BLM shall consult with involved Tribe(s) on the distribution to other consulting parties of any HPTP(s) that specifically addresses treatment for adverse effects to historic properties to which the Tribes attach religious or cultural significance. Such a specific HPTP(s) shall be governed by the consultation time frames as provided in Section V(a)(iii) and (iv).
- iv) BLM will provide the consulting parties with written documentation indicating whether and how the draft HPTP will be modified in response to any timely comments received. If the HPTP is revised in response to comments received within that 30 day period, BLM shall submit the revised HPTP to all parties for a final, 15 day review period. BLM will consider any timely comments in finalizing the HPTP and provide the consulting parties and Tribes with a copy.
- b) BLM shall ensure that any HPTP developed in accordance with this Stipulation and Appendix B of this Agreement is completed and implemented. A finalized HPTP will be included in Appendix B of this Agreement
- c) BLM shall ensure that a HPMP, which provides for the protection and management of historic properties during the operational life and decommissioning of the solar energy power plant, is developed and implemented in accordance with Appendix C of this Agreement. A finalized HPMP will be included in Appendix C of this Agreement.
- d) An amendment to an HPTP or HPMP will go into effect when agreed to in writing by the Signatories. If the Signatories do not agree on an HPTP or HPMP amendment proposed by another Signatory, the disagreement will be resolved pursuant to the procedures in Stipulation XII of this Agreement.

## **VI. DISCOVERIES AND UNANTICIPATED EFFECTS**

- a) The BLM, in consultation with the consulting parties and Tribes, will seek to develop a monitoring and discovery plan for the Project pursuant to 36 C.F.R. 800.13(a)(1). A finalized monitoring and discovery plan will be included as Appendix J to this Agreement.
- b) If the BLM determines that implementation of the Project or a HPTP will affect a previously unidentified property that may be eligible for the NRHP, or affect a known

historic property in an unanticipated manner, and a monitoring and discovery plan has not been finalized, the BLM, in coordination with the Energy Commission, will address the discovery or unanticipated effect by following the procedures at 36 C.F.R. 800.13(b)(3) where a process has not been yet been agreed to pursuant to 36 C.F.R. 800.13(a)(1).

- c) The BLM at its discretion may assume any discovered property to be eligible for inclusion in the NRHP. The BLM's compliance with this stipulation shall satisfy the requirements of 36 C.F.R. 800.13(a)(1).

## **VII. TREATMENT OF HUMAN REMAINS OF NATIVE AMERICAN ORIGIN**

- a) The BLM shall ensure that any that Native American burials and related items discovered on BLM administered lands during implementation of the terms of the Agreement will be treated in accordance with the requirements of the NAGPRA. The BLM will consult with concerned Tribes, Tribal organizations, or individuals in accordance with the requirements of Sections 3(c) and 3(d) of the NAGPRA and implementing regulations found at 43 C.F.R. Part 10 to address the treatment of Native American burials and related cultural items that may be discovered during implementation of this Agreement.
- b) In consultation with the Tribes, the BLM shall seek to develop a written plan of action pursuant to 43 C.F.R. 10.5(e) to manage the inadvertent discovery or intentional excavation of human remains, funerary objects, sacred objects, or objects of cultural patrimony. The finalized plan of action shall be included as Appendix K to this Agreement.
- c) The BLM shall ensure that Native American burials and related cultural items on private lands are treated in accordance with the applicable requirements of the California Public Resources Code at Sections 5097.98 and 5097.991 , and of the California Health and Human Safety Code at Section 7050.5(c).

## **VIII. STANDARDS AND QUALIFICATIONS**

- a) **PROFESSIONAL QUALIFICATIONS.** All actions prescribed by this Agreement that involve the identification, evaluation, analysis, recordation, treatment, monitoring, and disposition of historic properties and that involve the reporting and documentation of such actions in the form of reports, forms or other records, shall be carried out by or under the direct supervision of a person or persons meeting, at a minimum, the Secretary of the Interior's Professional Qualifications Standards (PQS), as appropriate (48 Fed. Reg. 44739 dated September 29, 1983). However, nothing in this stipulation may be interpreted to preclude any party qualified under the terms of this paragraph from using the services of persons who do not meet the PQS, so long as the work of such persons is supervised by someone who meets the PQS. Tribal consultants who are available to perform monitoring duties are assigned and approved of by each Tribe.

- b) **DOCUMENTATION STANDARDS.** Reporting on and documenting the actions cited in this Agreement shall conform to every reasonable extent with the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (48 Fed Reg. 44716-40 dated September 29, 1983), as well as, the BLM 8100 Manual, the California Office of Historic Preservation's Preservation Planning Bulletin Number 4(a) December 1989, Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports, and any specific and applicable county or local requirements or report formats.
- c) **CURATION STANDARDS.** On BLM-administered land, all records and materials resulting from the actions cited in Stipulation III, IV, V and VI of this Agreement shall be curated in accordance with 36 C.F.R. Part 79, and the provisions of the NAGPRA, 43 C.F.R. Part 10, as applicable. To the extent permitted under Sections 5097.98 and 5097.991 of the California Public Resources Code, the materials and records resulting from the actions cited in Stipulations III through V of this Agreement for private lands shall be curated in accordance with 36 C.F.R. Part 79. The BLM will seek to have the materials retrieved from private lands donated through a written donation agreement. The BLM will attempt to have all collections curated at one local facility where possible unless otherwise agreed to by the consulting parties.

## **IX. REPORTING REQUIREMENTS**

- a) Within twelve (12) months after the BLM, in consultation with the Energy Commission, has determined that all fieldwork required by Stipulations III through V has been completed, the BLM will ensure preparation and concurrent distribution to the consulting parties and Tribes a draft report that documents the results of implementing the requirements of each Stipulation. The consulting parties and Tribes will be afforded 45 days following receipt of each draft report to submit any written comments to the BLM. BLM will consider timely comments when making revisions to the draft report. A revised draft will be provided for a 14 day review. The BLM will consider timely comments in making final changes to the report. Thereafter, the BLM may issue the reports in final form and distribute these documents in accordance with Stipulation IX(b).
- b) Unless otherwise requested, the BLM will distribute one copy of final reports documenting the results of implementing the requirements of Stipulations III through V to each consulting party, Tribes and to the California Historical Resources Information System (CHRIS) Regional Information Center.
- c) The BLM shall ensure that any draft document that communicates, in lay terms, the results of implementing Stipulations III through V to members of the interested public is distributed for review and comment concurrently with and in the same manner as that prescribed for the draft technical report prescribed by Stipulation IX(a). If the draft

document prescribed is a publication, such as a report or brochure, the BLM shall distribute the publication upon completion to the consulting parties and to other entities that the consulting parties may deem appropriate.

## **X. IMPLEMENTATION OF THE UNDERTAKING**

- a) The BLM may authorize construction activities and manage the implementation of HPTP(s) in phases corresponding to the construction phases of the Project.
  - i) Upon approval of the HPTP(s) and implementation of the components of the HPTP(s) subject to determinations of compliance by the BLM for Phase I of the Project, BLM may authorize a Notice to Proceed for construction activities within the Phase I area only.
    - (1) An HPTP(s) for Phase II of the Project may be developed and implemented after approval of the HPTP(s) and issuance of the Notice to Proceed described above for the Phase I component.
- b) The BLM may authorize construction activities, including but not limited to those listed below, to proceed in specific geographic areas of the Project's APE where there are no historic properties; where there will be no adverse effect to historic properties; where a monitoring and discovery process or plan is in place per Stipulation VI(b); or where an HPTP(s) has been approved and initiated. Such construction activities may include:
  - i) demarcation, set up, and use of staging areas for the Project's construction,
  - ii) conduct of geotechnical boring investigations or other geophysical and engineering activities, and
  - iii) grading, constructing buildings, and installing SunCatchers.
- c) Initiation of any construction activities on federal lands shall not occur until after the BLM issues the ROD, ROW grant, and Notice(s) to Proceed.

## **XI. AMENDMENTS TO THE AGREEMENT**

- a) This Agreement may be amended only upon written agreement of the Signatories.
  - i) Upon receipt of a request to amend this Agreement, the BLM will immediately notify the other consulting parties and initiate a 30 day period to consult on the proposed amendment, whereupon all parties shall consult to consider such amendments.
  - ii) If agreement to the amendment cannot be reached within the 30 day period, resolution of the issue may proceed by following the dispute resolution process in Stipulation XII.

- b) This Agreement may be amended when such an amendment is agreed to in writing by all Signatories.
- c) Amendments to this Agreement shall take effect on the dates that they are fully executed by the Signatories.
- d) Modifications, additions, or deletions to the appendices made as a result of continuing consultation among the consulting parties do not require the Agreement to be amended.

## **XII. DISPUTE RESOLUTION**

- a) Should the Signatories or Invited Signatories object at any time to the manner in which the terms of this Agreement are implemented, the BLM will immediately notify the other Signatories and Invited Signatories and consult to resolve the objection.
- b) If the objection can be resolved within the consultation period, the BLM may authorize the disputed action to proceed in accordance with the terms of such resolution.
- c) If the objection cannot be resolved through such consultation, the BLM will forward all documentation relevant to the objection to the ACHP. Any comments provided by the ACHP within 30 days after its receipt of all relevant documentation will be taken into account by the BLM in reaching a final decision regarding the objection. The BLM will notify the other Signatories, Invited Signatories, and Concurring Parties in writing of its final decision within 14 days after it is rendered.
- d) The BLM's responsibility to carry out all other actions under this Agreement that are not the subject of the objection will remain unchanged.
- e) At any time during implementation of the terms of this Agreement, should an objection pertaining to the Agreement be raised by a Concurring Party or a member of the interested public, the BLM shall immediately notify the Signatories, Invited Signatories, and other Concurring Parties, consult with the SHPO about the objection, and take the objection into account. The other consulting parties may comment on the objection to the BLM. The BLM shall consult with the objecting party/parties for no more than 30 days. Within 14 days following closure of consultation, the BLM will render a final decision regarding the objection and proceed accordingly after notifying all parties of its decision in writing. In reaching its final decision, the BLM will take into account all comments from the parties regarding the objection.

## **XIII. TERMINATION**

- a) If any Signatory or Invited Signatory to this Agreement determines that its terms will not or cannot be carried out, that party shall immediately consult with the other parties to

attempt to develop an amendment per Stipulation XI above. If within sixty (60) days an amendment cannot be reached;

- i) a Signatory or Invited Signatory may terminate the Agreement upon written notification to the other Signatories and Invited Signatories.
- b) If the Agreement is terminated, and prior to work continuing on the Project, the BLM shall continue to follow the process provided at 36 C.F.R. 800.4 – 6 until (a) a new Agreement is executed pursuant to 36 C.F.R. 800.6 or (b) the agencies request, take into account, and respond to the comments of the ACHP under 36 C.F.R. 800.7. The BLM shall notify the Signatories and Invited Signatories as to the course of action it will pursue.

#### **XIV. ADDITION/WITHDRAWAL OF PARTIES FROM/TO THE AGREEMENT**

- a) Should conditions of the Project change such that other state, Federal, or tribal entities not already party to this Agreement request to participate, the BLM will notify the other consulting parties and invite the requesting party to participate in the Agreement. The Agreement shall be amended following the procedures in Stipulation XI.
- b) Should a Concurring Party determine that its participation in the Project and this Agreement is no longer warranted, the party may withdraw from participation by informing the BLM. The BLM shall inform the other consulting parties to this Agreement of the withdrawal.

#### **XV. DURATION OF THIS AGREEMENT**

- a) This Agreement will expire if the Project has not been initiated and the BLM ROW grant expires or is withdrawn, or the stipulations of this Agreement have not been initiated, within five (5) years from the date of its execution. This Agreement will also expire 30 years after its execution. At such time, and prior to work continuing on the Project, the BLM shall continue to follow the process provided at 36 C.F.R. 800.4 – 6 until either (a) a new memorandum of agreement or programmatic agreement is executed pursuant to 36 C.F.R. 800.6, or (b) the BLM request, take into account, and respond to the comments of the ACHP under 36 CFR 800.7. The BLM shall notify the Signatories as to the course of action they will pursue within 30 days.
- b) The Signatories and Invited Signatories shall consult at year 4 to review this Agreement and every 5 years subsequently. Additionally, the Signatories and Invited Signatories shall consult not less than one year prior to the expiration date to reconsider the terms of this Agreement and, if acceptable, have the Signatories extend the term of this Agreement. Reconsideration may include continuation of the Agreement as originally

executed or amended, or termination. Extensions are treated as amendments to the Agreement under Stipulation XI.

- c) Unless the Agreement is terminated pursuant to Stipulation XIII, another agreement executed for the Project supersedes it, or the Project itself has been terminated, this Agreement will remain in full force and effect until BLM, in consultation with the other Signatories, determines that implementation of all aspects of the Project has been completed and that all terms of this Agreement and any subsequent tiering requirements have been fulfilled in a satisfactory manner. Upon a determination by BLM that implementation of all aspects of the undertaking have been completed and that all terms of this Agreement and any subsequent tiered agreements have been fulfilled in a satisfactory manner, BLM will notify the consulting parties of this Agreement in writing of the agency's determination. This Agreement will terminate and have no further force or effect 30 days after BLM so notifies the Signatories to this Agreement, unless BLM retracts its determination before the end of that period.

## **XVI. EFFECTIVE DATE**

This Agreement and any amendments shall take effect on the date that it has been fully executed by the Signatories. The Agreement and any amendments thereto shall be executed in the following order: (1) BLM, (2) SHPO.

Execution and implementation of this Agreement is evidence that the BLM have taken into account the effect of this Project on historic properties, afforded the ACHP a reasonable opportunity to comment, and that the BLM have satisfied their responsibilities under Section 106. The Signatories and Invited Signatories to this Agreement represent that they have the authority to sign for and bind the entities on behalf of whom they sign.

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**SIGNATORY PARTIES**

U.S. BUREAU OF LAND MANAGEMENT

BY: *Roxie C. Trost* DATE: *Sept. 20, 2010*  
Roxie Trost  
Manager, Barstow Field Office

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

BY: *Milford Wayne Donaldson* DATE: *21 SEP 2010*  
Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer

**INVITED SIGNATORY PARTIES**

California Energy Commission  
Calico Solar LLC

**Invited Signatory**

CALIFORNIA ENERGY COMMISSION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

**Invited Signatory**

CALICO SOLAR LLC

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

**CONCURRING PARTIES**

CHEMEHUEVI RESERVATION  
FORT MOJAVE INDIAN TRIBE  
SAN MANUEL BAND OF MISSION INDIANS  
TWENTYNINE PALMS BAND OF MISSION INDIANS  
CALIFORNIA UNIONS FOR RELIABLE ENERGY

**Concurring Party**

CHEMEHUEVI RESERVATION

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

**Concurring Party**

FORT MOJAVE INDIAN TRIBE

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
TITLE: \_\_\_\_\_

**Concurring Party**

SAN MANUEL BAND OF MISSION INDIANS

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

**Concurring Party**

TWENTYNINE PALMS BAND OF MISSION INDIANS

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
TITLE: \_\_\_\_\_

**Concurring Party**

CALIFORNIA UNIONS FOR RELIABLE ENERGY

BY: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

## **APPENDIX A: IDENTIFICATION AND EVALUATION**

### **I. IDENTIFICATION**

- a) The BLM will ensure that all cultural resources identified during cultural resources survey are recorded on new or updated California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the “Instructions for Recording Historical Resources” (Office of Historic Preservation, March 1995).
  - i) Previously unrecorded cultural resources which have religious or cultural significance to Tribes identified during cultural resources investigations and/or through consultations with Tribes may be recorded on the California DPR Form 523, unless a Tribe, Tribal Organization, or an individual from a Tribe objects. If such objection arises, the properties may be recorded on a form and in a manner that is in accordance with the recommendations of the Tribe, Tribal Organization, or of the individual. If the traditional cultural property is also a historical or archaeological site, those components of site will be recorded on the appropriate DPR form and filed with the California Historical Resources Information System (CHRIS).
- b) The cultural resources contractor will obtain permanent site numbers from CHRIS regional information center.
- c) The BLM, in consultation with the Energy Commission and the SHPO, shall review all site records for accuracy, adequacy of information, and completeness and determine whether they are sufficient to support agency determinations and findings. Final approved site records shall be submitted to the CHRIS. Permanent site numbers shall then be used in all final reports and other documents prepared pursuant to the requirements of this Agreement.
- d) The BLM, in consultation with the Energy Commission will ensure that cultural resources survey reports are responsive to Energy Commission Data Requests.

### **II. EVALUATION**

- a) The BLM shall authorize field investigations by the Applicant for the purposes of evaluation of the potential site types identified in the APE listed below (but not limited to) and evaluation of the information potential and significance of the cultural resources in the APE.

#### *Prehistoric Archaeological Resources*

Chipped Stone Deposits

Sparse Lithic Scatters

Chipped and Ground Stone Deposits

Ceramic Deposits

Archaeological Deposits that Include FAR Concentrations

## Trail Segments

### *Historical Archaeological Resources*

Surveying Monuments

Historic Refuse Deposits

Pebble and Cobble Concentrations

Transportation and Trail segments

### *Unique Archaeological Resources*

Historic Route 66 Highway

Old National Trails Highway

- b) BLM shall consult with the Tribes and seek the views and comments of Tribal organizations and individual tribal members regarding any unevaluated cultural resource to which they may attach religious or cultural significance in order to ascertain the status of these places relative to NRHP and CRHR eligibility criteria.

## **APPENDIX B: HISTORIC PROPERTIES TREATMENT PLAN(S)**

### **I. *HISTORIC PROPERTIES TREATMENT PLAN(S) provide for the resolution or mitigation of effects to historic properties as a result of the project.***

- a) Any HPTP tiered from the Agreement shall include but is not limited to:
  - i) A list of the historic properties subject to the HPTP, determined or treated as eligible for project management purposes, in the APE that the construction of the Project will unconditionally avoid,
  - ii) The measures that the Applicant will take to avoid, minimize, or mitigate the adverse effects on historic properties,
  - iii) If a separate monitoring and/or discovery plan is not already in place, provide a plan for monitoring during construction, which would include the treatment of inadvertent discoveries and the participation of tribal cultural specialists. The following shall be considered during development of these plans:
    - (1) Qualifications of archaeological monitors
    - (2) participation of tribal cultural specialists in monitoring
    - (3) areas in the APE requiring monitoring
    - (4) authority of monitors to halt work
    - (5) protective measures for historic properties
    - (6) communication protocols
    - (7) safety and resource training
    - (8) procedures upon discovery
    - (9) evaluation of the inadvertent discoveries
    - (10) implementation of standard treatment measures
    - (11) field protocol upon discovery of human remains
  - iv) The proposed disposition of recovered materials and records shall be curated in accordance with Stipulation VIII(c).
  - v) The procedures for treatment and disposition of any human remains, funerary objects, sacred objects, and objects of cultural patrimony in accordance with NAGPRA and the California Health and Safety Code 7050.5 as appropriate.
  - vi) A research design which addresses significant themes and questions for the types of historic properties to receive treatment.
  - vii) A schedule for completing treatment measures, including analysis, reporting and disposition of materials and records, as well as a schedule for completing the draft and final data recovery report(s).

viii) A description of alternative treatments for adverse effects that are not data recovery and that may include (but is not limited to):

- (1) Placement of construction within portions of historic properties that do not contribute to the qualities that make the resource eligible
- (2) Deeding cemetery areas into open-space in perpetuity and providing the necessary long-term protection measures
- (3) Public interpretation including the preparation of a public version of the cultural resources studies and/or education materials for local schools
- (4) Access by Indian tribes to traditional areas in property after the project has been constructed
- (5) Support by Applicant to cultural centers in the preparation of interpretive displays
- (6) Consideration of other off-site mitigation

b) Any treatment plan tiered from this Agreement or the HPTP shall reflect the ACHP archaeological guidance at <http://www.achp.gov/archguide/>, the BLM 8100 Manual, and the Secretary of the Interior's Standards for the Treatment of Historic Properties.

## **II. COORDINATION WITH ENERGY COMMISSION MEASURES UNDER CEQA**

- a) Guidelines for implementation codified in the California Code of Regulations (CCR), Title 14, Chapter 3, Sections 15000 et seq., requires state and local public agencies to identify the environmental impacts of proposed discretionary activities or projects, determine if the impacts will be significant, and identify alternatives and mitigation measures that will substantially reduce or eliminate significant impacts to the environment. Pursuant to 13 CRR Section 15126.4(a)(1), feasible measures which could minimize adverse impacts must be described in the environmental assessment.
  - i) Section 15221(b) provides that because NEPA does not require separate discussion of mitigation measures, these points of analysis will need to be added, supplemented, or identified before the EIS can be used as an EIR.
  - ii) Section 15126.4(a)(1)(B) states that formulation of mitigation measures should not be deferred until some future time, but that measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way.

## **III. PERFORMANCE STANDARDS FOR NHPA SECTION 106 AND CEQA MITIGATION**

- a) Cultural mitigation measures and performance standards considered within the Section 106 consultation and CEQA process include, but are not limited to:

- i) Avoidance
- ii) For cultural resources, the preferred method of mitigation is avoidance of all cultural resources to the maximum extent practicable. Mitigation measures which could include avoidance are normally developed through consultation to reduce impacts to significant cultural resources. The BLM through the consultation process and development of the HPTP(s) will determine which mitigation measures are applied to specific cultural resources.
- iii) Archaeological Data Recovery
  - (1) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.
  - (2) Data recovery shall not be required for an historical resource if the lead federal agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historical resource.
- iv) Built-Environment Resources
  - (1) Documenting built-environment resources in accordance with the standards and guidelines provided by the Historic American Building Survey (HABS), Historic American Engineering Record (HAER), Historic American Landscapes Survey (HALS).
  - (2) Relocating or moving historic buildings, objects or structures out of the APE.
- v) Properties of Sacred or Cultural Significance to Indian Tribes
  - (1) Cremation/Burial Sites
    - (a) Avoidance of cremation or burial sites is the preferred management alternative.
    - (b) Where avoidance of direct physical effects is not achievable, treatment shall follow the provisions of the NAGRPA Plan of Action as provided in Appendix L.
  - (2) Trails
    - (a) Avoidance of direct physical effects to trails is the preferred management alternative.
    - (b) Where avoidance of direct physical effects is not achievable, treatment shall follow the provisions of the HPTP. A study of trails may be carried out to determine the nature and extent of the trails beyond the APE and may be considered within the context of a HALS study.

- (3) Geological landforms or other places of religious or cultural significance.
  - (a) BLM shall continue to seek information from the Tribe(s) or Tribal organizations to determine the character and use of places of religious or cultural significance.
    - (i) Maintenance of existing access to places of religious or cultural significance is the preferred management alternative.
  - (b) Engineering solutions to eliminate or minimize direct or indirect non-physical effects will be identified, including but not limited to, orienting the SunCatchers to minimize glare, or erecting screens to eliminate glare.

vi) Discoveries

- (1) Following the discovery of any resources determined by BLM to be eligible to the NRHP, the Applicant shall ensure that the designated cultural resources contractor prepares a research design and a scope of work for any necessary data recovery or additional mitigation. The Applicant shall submit the proposed research design and scope of work to the BLM and Energy Commission's Compliance Project Manager for review and approval.
- (2) The proposed research design and scope of work shall include (but not be limited to): a discussion of the methods to be used to recover additional information and any needed analysis to be conducted on recovered materials; a discussion of the research questions that the materials may address or answer by the data recovered from the Project, and; discussion of possible results and findings.

vii) Monitoring

- (1) Prior to the start of vegetation clearance or earth disturbing activities or Project site preparation, the Applicant shall provide the designated cultural resources monitors and the BLM and/or Energy Commission's CPM with maps and/or drawings showing the footprint of the power plant and all linear facilities. Maps provided will include USGS 7.5-minute topographic quadrangle maps. If the designated cultural resource specialist requests enlargements or strip maps for linear facility routes, the Applicant shall provide them. If the footprint of the power plant or linear facilities changes, the Applicant shall provide maps and drawings reflecting these changes, to the cultural resources specialist within five days. Maps shall show the location of all areas where surface disturbance may be associated with Project-related access roads, and any other Project components.
- (2) The designated cultural resource specialist shall be available at all times to respond within 24 hours after pre-construction or construction activities have been halted due to the discovery of a cultural resource(s). The specialist, or representative of the Applicant shall have the authority to halt or redirect construction activities if previously undiscovered cultural resource materials are encountered during vegetation clearance or earth disturbing activities or project site preparation or construction. If such resources are discovered, the designated

cultural resource specialist shall be notified and the Applicant or Applicant's representative shall halt construction in order to protect the discovery from further damage and the BLM will be notified. Project construction may continue elsewhere on the Project if the BLM determines that it will not affect the cultural resource in question.

viii) Qualifications

(1) Prior to the start of construction-related vegetation clearance, or earth-disturbing activities or Project site preparation; or the movement or parking of heavy equipment onto or over the Project surface, the Applicant shall provide the BLM and/or the Energy Commission CPM with the name and statement of qualifications for its designated cultural resource specialist and alternate cultural resource specialist, if an alternate is proposed, who will be responsible for implementation of all BLM cultural resources conditions and Energy Commission cultural resources conditions of certification. The statement of qualifications for the designated cultural resource specialist and alternate shall include all information needed to demonstrate that the specialist meets at least the minimum qualifications specified by the National Park Service, Heritage Preservation Services.

(2) Training

(a) Prior to the start of vegetation clearance or earth disturbing activities or Project site preparation, the designated cultural resource specialist shall prepare an employee training program. The Applicant shall submit the cultural resources training program to the BLM, Energy Commission, and SHPO for review and written approval. If a video is used as part of the training program, the owner shall also submit the script for review and written approval.

(b) Prior to the start of vegetation clearance or earth disturbing activities or Project site preparation, and throughout the project construction period as needed for all new employees, the Applicant shall ensure that the designated cultural resource trainer(s) provide(s) approved cultural resources training to all Project managers, construction supervisors, or anyone coming on the construction site as an employee, contractor, subcontractor, or in any other capacity to complete work for the Applicant. The Applicant shall ensure that the designated trainer provides the workers with the approved a set of procedures for reporting any sensitive resources that may be discovered during Project-related ground disturbance. In addition, the Applicant shall communicate the work curtailment procedures that the workers are to follow if previously undiscovered cultural resources are encountered during construction.

#### **IV. HISTORIC PROPERTY TREATMENT PLANS (HPTP)**

- a) Finalized HPTPs will be included as an attachment to this Appendix.
- b) In developing the HPTPs, the HPTPs shall consider the following measures:
  - i) Prehistoric Period Historic Properties
    - (1) Avoidance
    - (2) Minimize
      - (a) Strategic placement of transmission towers in areas of a site that would not adversely affect the information values
      - (b) Data recovery for historic properties eligible under Criterion D only
        - (i) Research Design
  - ii) Historic Period Historic Properties
    - (1) Avoidance
    - (2) Minimize
      - (a) Data recovery for historic properties eligible under Criterion D only
        - (i) Research Design
      - (b) Historic built-environment Historic Properties with associative values
        - (i) Historic Route 66 Highway
      - (c) Resources of Native American religious and cultural significance and Traditional Cultural Properties
        - (i) Avoidance
        - (ii) Minimize
        - (iii) Monitor
        - (iv) Access

## **APPENDIX C: HISTORIC PROPERTIES MANAGEMENT PLAN**

### **I. HISTORIC PROPERTIES MANAGEMENT PLAN**

- a) A Historic Properties Management Plan (HPMP) will be developed to further manage or prescribe additional treatment to historic properties within the APE during the future operation, long-term maintenance and decommissioning of the Project and consider effects to historic properties in relation to those actions. The HPMP will include but is not limited to monitoring requirements for those cultural resources within the APE that were avoided through project redesign.
- b) The BLM shall submit the HPMP to the consulting parties to the Agreement and Tribes for a 60 day review period. Absent comments within this time frame, the BLM may finalize the HPMP. If comments are received, the BLM will provide the parties with written documentation indicating whether and how the draft HPMP will be modified. If the HPMP is revised in response to comments, the BLM shall submit the revised HPMP to all parties for an additional 30 day review period. Absent comments within this time frame, the BLM will finalize the HPMP. The BLM will provide each of the consulting parties and Tribes a copy of the final HPMP.

## APPENDIX D: PROJECT DESCRIPTION

The Calico Solar Project is a proposed 850-megawatt (MW) solar energy power plant. The project proposal also includes a 230-kilovolt (kV) on-site substation, 4 miles of 230 kV transmission line, a main services complex, a 0.4-mile water line, and other related facilities. The proposed project would be built on approximately 6,215 acres of land administered by the BLM in San Bernardino County, California, approximately 35 miles east of Barstow, and 13 miles east of Newberry Springs.

The proposed Calico Solar Project includes the following components:

- a) A solar thermal power plant facility.
- b) The proposed project would be constructed in two phases utilizing SunCatcher (Stirling Engine) technology, and would include approximately 34,000 25 kilowatt (kW) solar power dishes with a generating capacity of approximately 850 megawatts (MW). Construction of the facility would proceed in blocks of 60 SunCatchers, which each comprise a 1.5 MW group. Construction of the project is expected to begin in late 2010 and will take approximately 23 months for Phase 1 completion and another 29 months for Phase 2 and final Project completion. The schedule will be approximately 60 months in duration, with construction requiring approximately 52 months. Power, however, would be available for transmission to the grid as each 60-unit (1.5 MW) group of SunCatchers is completed.
  - i) The first phase would consist of up to 11,000 SunCatchers configured in arrays of 184 1.5 mW solar groups (60 SunCatchers/1.5 MW group) with a generating capacity of about 275 MW.
  - ii) The second phase would consist of approximately 23,000 SunCatchers configured in 383 1.5 MW groups (60 SunCatchers/1.5 MW group) with a net generating capacity of 575 MW.
  - iii) The SunCatcher is a 25-kilowatt-electrical (kW) solar dish system designed to automatically track the sun and collect and focus solar energy onto a power conversion unit (Stirling Engine, or PCU), which generates electricity. The system consists of a 40-foot-high by 38-foot-wide solar concentrator in a dish structure that supports an array of curved glass mirror facets. These mirrors collect and concentrate solar energy onto the solar receiver of the PCU.
    - 1) Each SunCatcher dish would typically be mounted on a foundation consisting of a hollow single metal pipe approximately 19 feet long and two feet in diameter that is hydraulically driven (vibrated) into the ground. This foundation is preferred because no concrete is required, no spoils are generated, and the foundations can be completely removed when the project is decommissioned.

- 2) When conditions are not conducive to the use of the metal pipe foundation, the foundation would consist of rebar-reinforced concrete constructed below grade. The SunCatcher pedestal on which the SunCatcher dish assembly is secured is approximately 18 feet 6 inches in height and would be an integrated part of the metal pipe foundation or would be a separate structure fastened to the rebar-reinforced concrete foundation at ground level.
  - 3) Solar groups would be arranged as necessary to fit the contours of the site. SunCatchers would be aligned in rows approximately 112 feet apart, with access roads constructed between alternating rows of SunCatchers. Blading for roadways and foundations would be conducted between alternating rows to provide access to individual SunCatchers. Brush trimming would be conducted between the remaining rows and around the SunCatchers and consists of cutting the top of the existing brush while leaving the existing native plant root system in place to minimize soil erosion.
  - 4) Electrical conduit and hydrogen delivery systems will be constructed in trenches connecting the SunCatcher units. Electrical conduit will be installed in trenches that are 24 inches wide and 30 inches deep. The hydrogen pipeline will be installed in trenches that are 4 inches wide and 24 inches deep.
- c) Related structures include a main services complex, which includes a maintenance building, an administration building and assembly buildings, a 230 kV electrical substation, access roads, a 0.4-mile water supply line, and a 4-mile 230 kV transmission line from the on-site substation to the existing Southern California Edison (SCE) Pisgah Substation.
  - d) The solar power generation plant would be located on approximately 6,215 acres of public land administered by the Bureau of Land Management. This area would be fenced around the perimeter of the generation plant for security.
  - e) A 52-acre main services complex, with a laydown/staging area occupying 15 acres of the total area, would be located toward the center of the site along the northern boundary of Phase 1.
  - f) An off-site 6-inch-diameter water supply pipeline would be constructed a distance of approximately 0.4 mile from the well located on private land owned by the Applicant, to the main services complex. The pipeline would be buried in a trench, approximately 30 inches deep on private land owned by the Applicant and within the project right-of-way.
  - g) A transmission line consisting of a single circuit with parallel conductors will be constructed a distance of 4 miles, with approximately a ¼ mile portion outside the project boundary and inside the SCE ROW, to connect the Project to the SCE Pisgah Substation.

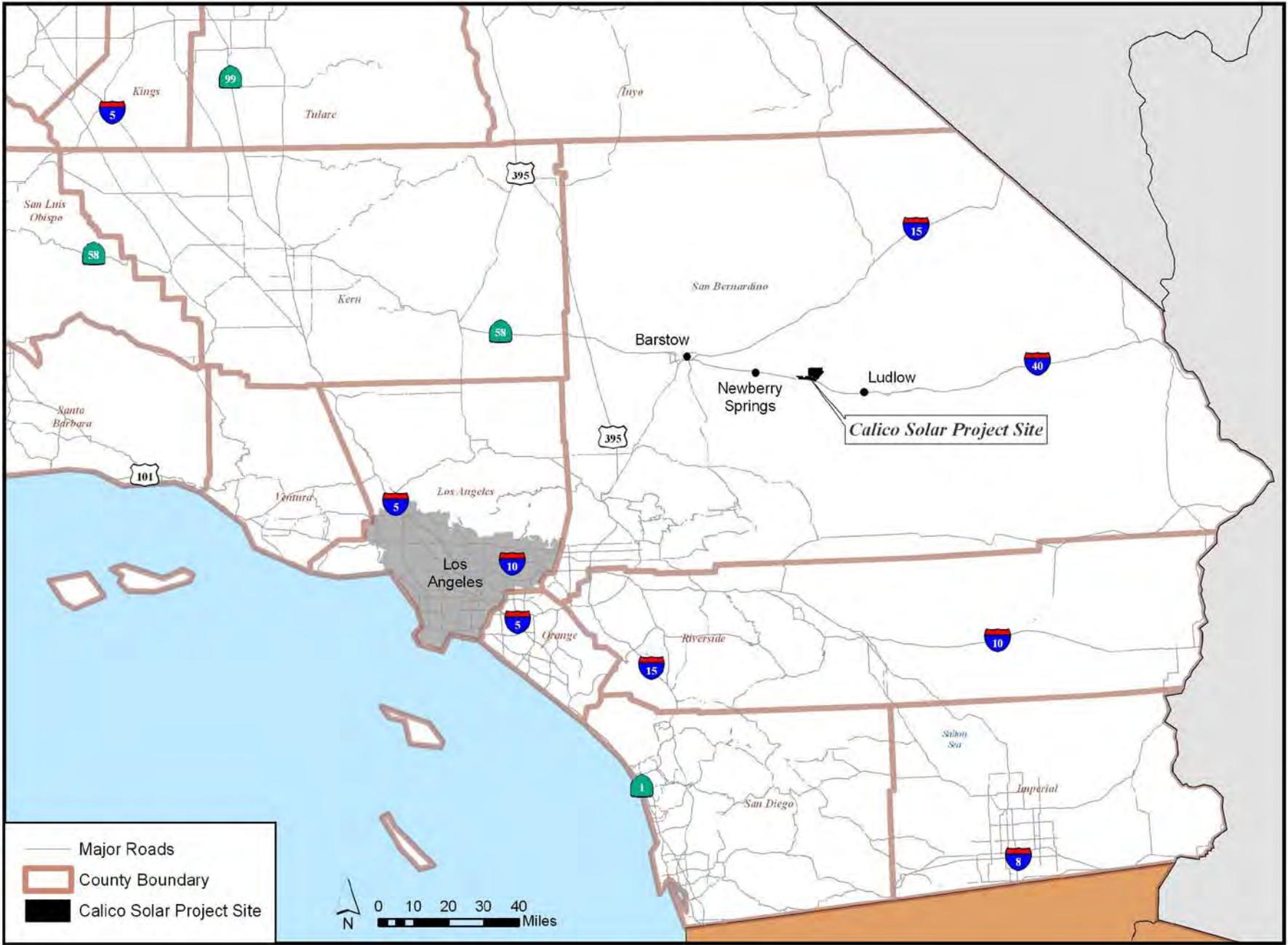
## **APPENDIX E: PROJECT MAPS AND ILLUSTRATIONS**

1. Project Vicinity Map
2. Project Overview Map
3. Project Proposed Action/Area of Potential Effect
4. Photograph of SunCatcher Solar Dish Array
5. Illustrated Photograph of SunCatcher Solar Dish Array

INTRODUCTION - FIGURE 1-1  
Calico Solar Project - Project Vicinity

AUGUST 2010

INTRODUCTION

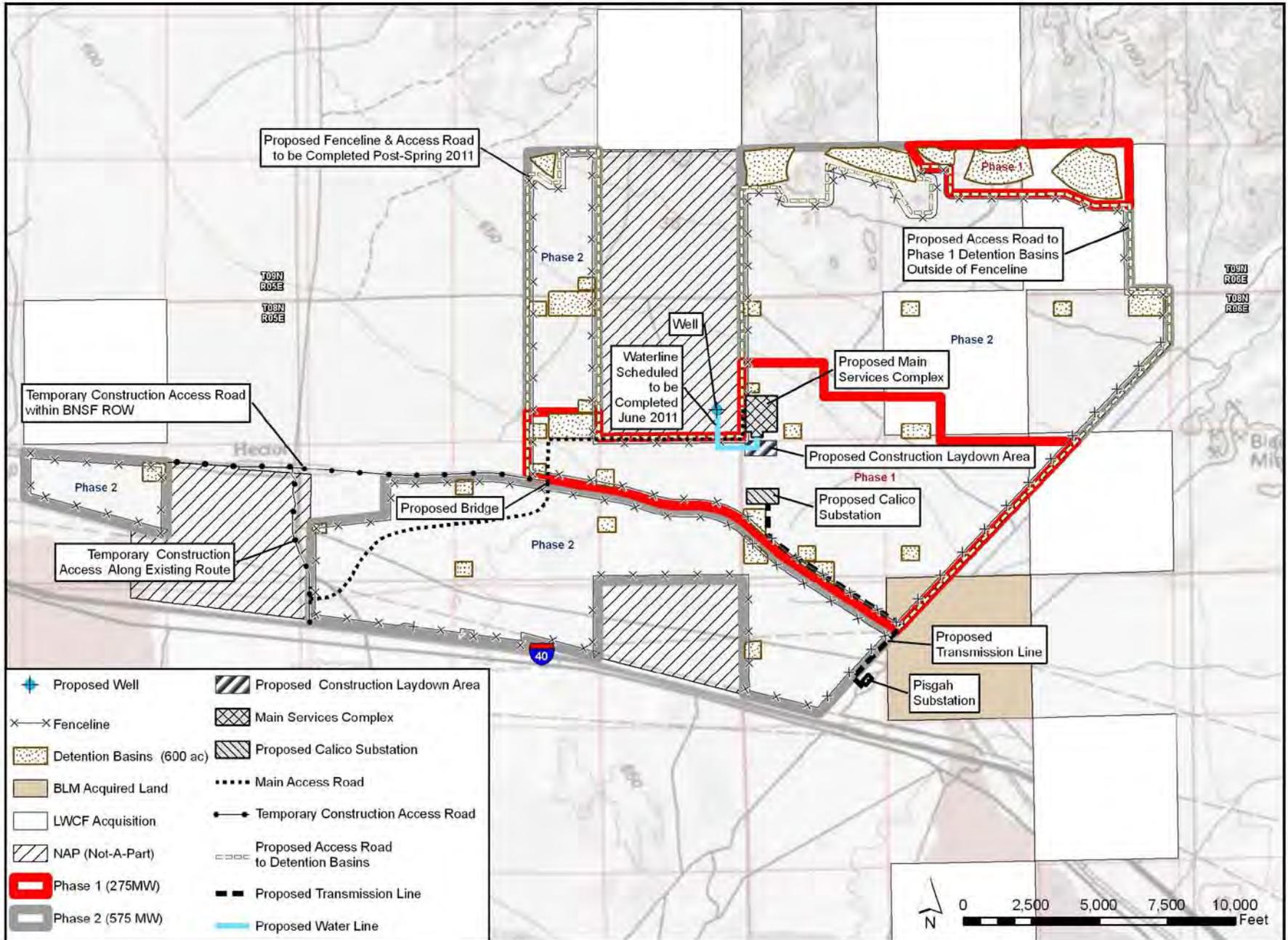


SOURCE: CEC, BLM, ESRI, URS

**INTRODUCTION - FIGURE 1-2**  
**Calico Solar Project - Proposed Action**

AUGUST 2010

INTRODUCTION



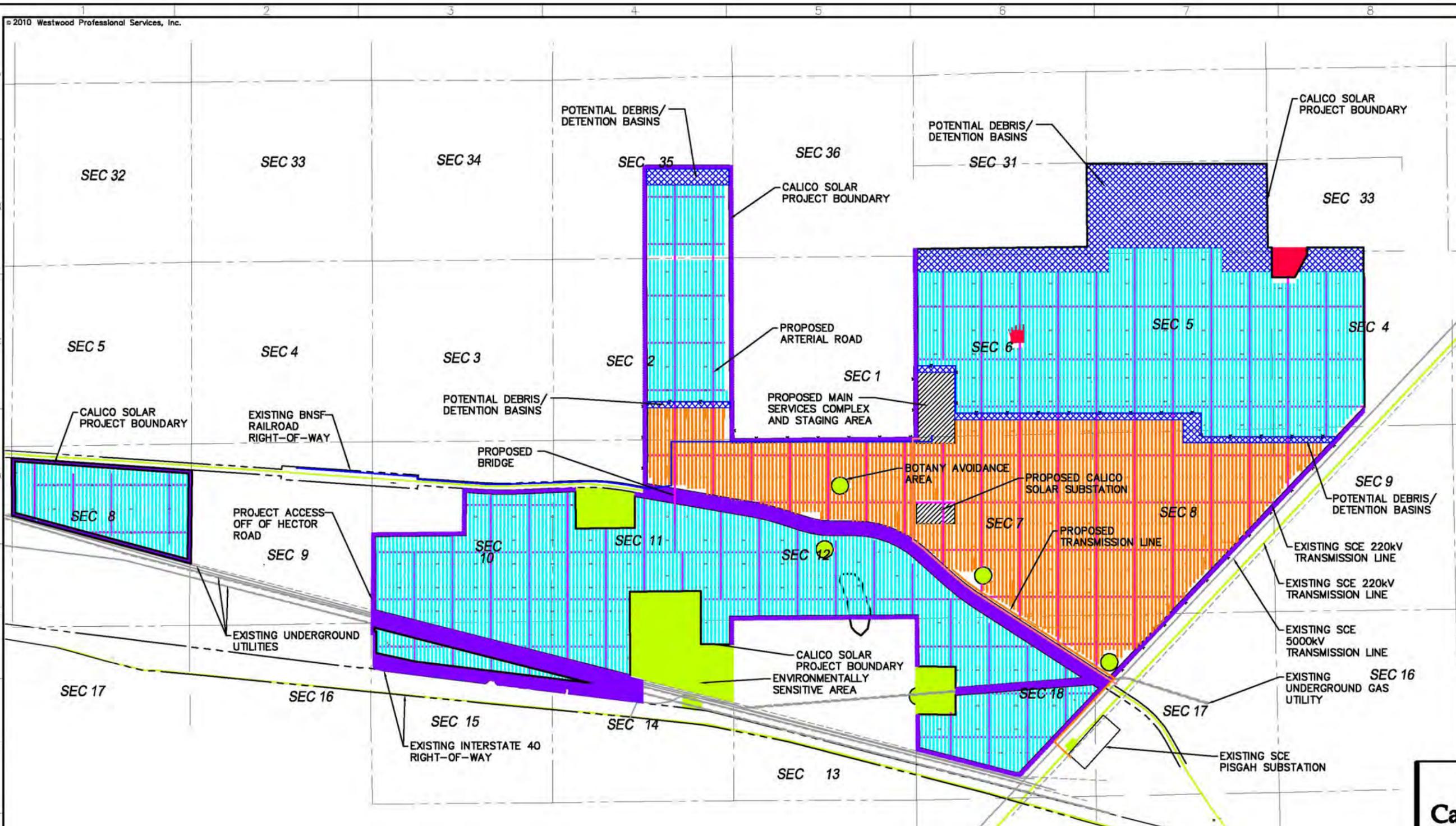
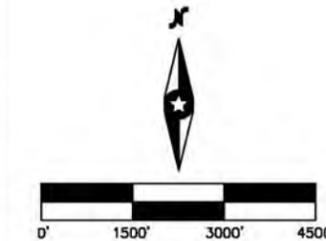
SOURCE: ESRI, Huit-Zollars, URS, USGS, BLM

Design:	ADC
Checked:	DOB
Drawn:	ADC
Record Drawing by/Date:	
Revisions:	
9 DATE DESCRIPTION	

Prepared for:  
  
**Mortenson**  
 construction  
 700 Meadow Lane  
 Minneapolis, MN 55440

**LEGEND:**

	SUNCATCHER UNIT ARRAY-PHASE 1
	SUNCATCHER UNIT ARRAY-PHASE 2
	PROPOSED PROJECT FACILITIES
	PROPOSED ARTERIAL ROAD
	POTENTIAL DEBRIS/DETENTION BASIN LOCATION
	ENVIRONMENTALLY SENSITIVE AREAS
	UNBUILDABLE AREA
	PROPERTY SETBACK ZONE
	PROPOSED WATERLINE
	PROPOSED TRANSMISSION LINE
	PROPOSED DISTRIBUTION LINE AND COMMUNICATION ROUTE

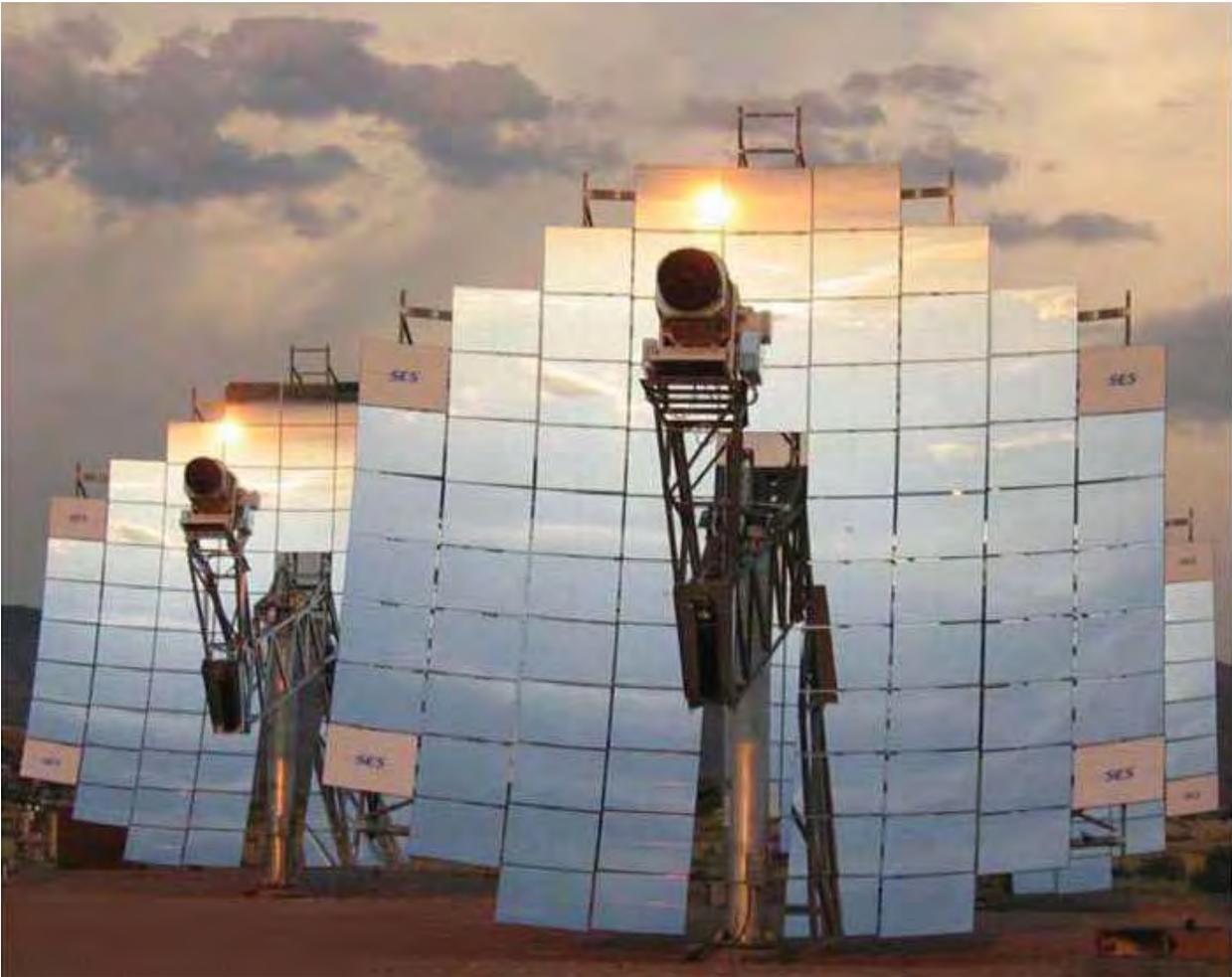


**Calico Solar**  
 San Bernardino County,  
 California

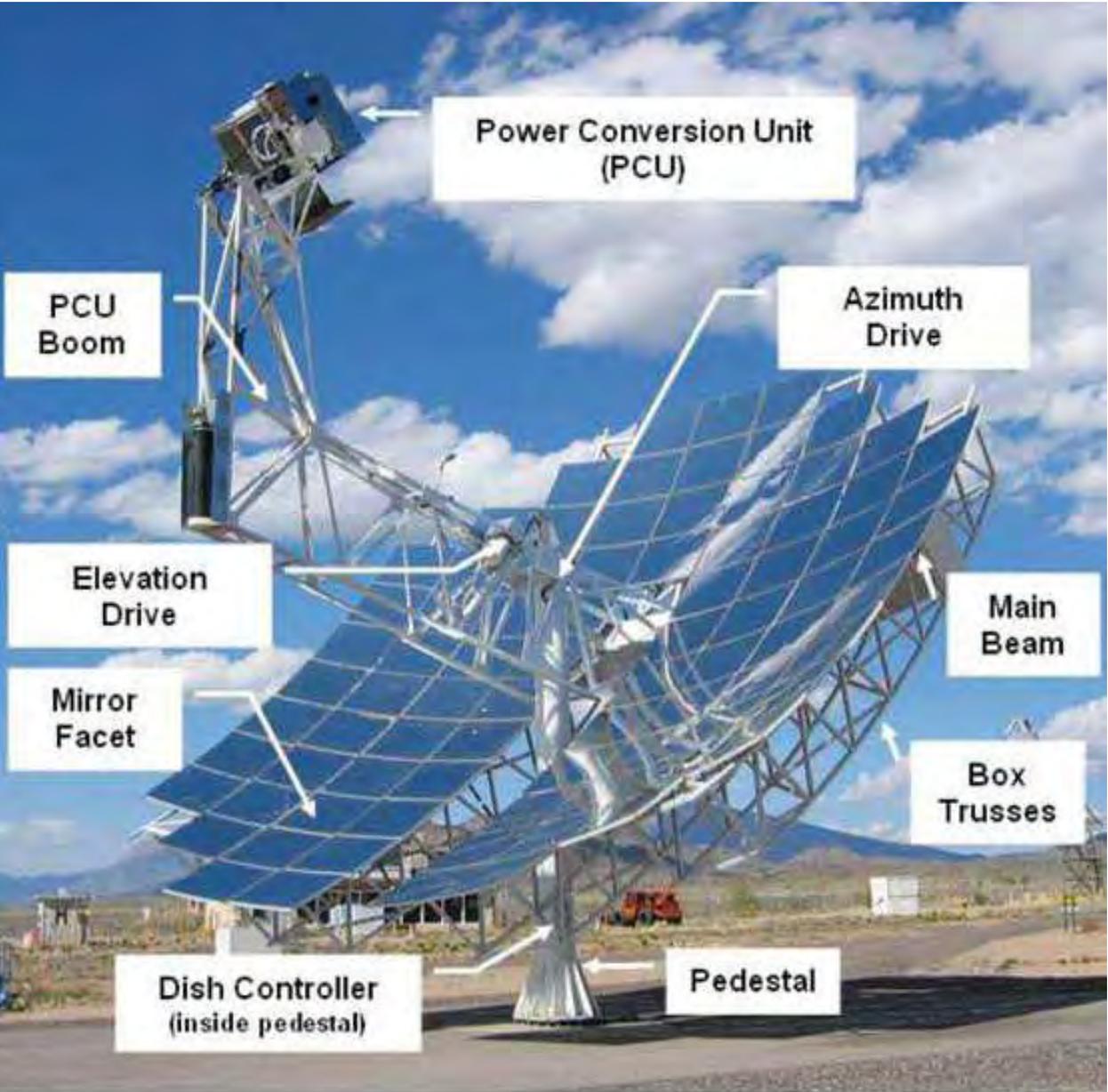
Figure 19 -  
 Site Plan

**NOT FOR CONSTRUCTION**  
 Solar Array:  
 Suncatcher dated 05/27/10  
 Date: 06/02/10  
 Sheet: 1 OF 1

Photograph of SunCatcher Solar Dish Array



Illustrated Photograph of a SunCatcher Solar Dish Array



## **APPENDIX F: SUMMARY OF CULTURAL RESOURCES INVESTIGATIONS**

The BLM, in coordination with the Energy Commission, has authorized the Applicant to conduct specific identification efforts for this undertaking including a review of the existing literature and records, cultural resources surveys, ethnographic studies, and geomorphological studies to identify historic properties that might be located within the APE.

i) The Applicant has retained URS Corporation to complete all of the investigations necessary to identify and evaluate cultural resources located within the Area of Potential Effect (APE) for both direct and indirect effects. URS Corporation is authorized to conduct cultural resources investigations on lands managed by the BLM under Cultural Resources Use Permits No. CA-06-01 and CA-06-11 issued by the BLM California State Office and BLM Fieldwork Authorizations CA-670-06-07FA09 and Fieldwork Authorization 680-08-026, issued in July 2008 through December 2009, and renewed again on April 15, 2009 and is in effect through September 2010.

ii) URS Corporation has completed a review of the existing historic, archaeological and ethnographic literature and records to ascertain the presence of known and recorded cultural resources in the APE, has conducted an intensive field survey for all of the lands identified in APE for direct effects for all project alternatives, and has completed intensive field surveys for alternatives on lands that are no longer part of the project. Approximately 8,230 acres of pedestrian survey to identify cultural resources within the APE has been completed. The ROW that BLM would issue encompasses approximately 6,215 acres of land. There are three cultural resources (CA-SBR-1908, RSS-017, and DRK-176/RAN-175/H) that the agency proposed determination eligible for the National Register that are no longer in the project APE because of project re-design.

URS Corporation conducted a records search at the San Bernardino Archaeological Information Center (SBAIC) housed at the San Bernardino County Museum in San Bernardino, California and searched all relevant previously recorded cultural resources site records and previous investigations completed within the project area and a 1-mile search radius around it. Information reviewed included location maps for all previously recorded trinomial and primary prehistoric and historical archaeological sites and isolates; site record forms and updates for all cultural resources previously identified; previous investigation boundaries; and National Archaeological Database citations for associated reports, historical maps, and historical addresses. The literature and records search identified 31 records related to cultural resources investigations conducted within 1-mile of the Project area. Several of these records were for prior projects which overlap the boundaries of the Calico Solar Project APE. The record search also identified approximately 60 previously recorded cultural resources within the APE and extended survey areas.

The Calico Solar Class III intensive field survey was conducted between August 4, 2008 and October 31, 2008. In response to BLM and CEC data requests, additional field work was conducted between October 2009 and March 2010. The additional field work was conducted to develop additional documentation for sites within the APE for the Phase 1

and Phase 2 components of the 850 MW solar energy plant. This work involved re-visiting and updating approximately 118 sites recorded in 2008. Other project-related components included in the APE were also examined during the cultural resources investigations. These included the Pisgah Substation, which is an existing facility. The water pipeline, temporary access road, and transmission line corridors were also surveyed, both within the project site and off-site locations that were known to be associated with the project at the time of the surveys.

The URS team identified a total of 335 cultural resources within the Project APE ; 119 archaeological sites [95 prehistoric, eight historic, and 14 multi-component (include both prehistoric and historic elements), and two indeterminate feature site (lack temporal data)], 206 archaeological isolated finds and 10 historic built environment resources. Based on the proposed development for this Project, 116 (of 119) archaeological sites and one portion of a historic built environment resource are subject to direct effect. The remaining three archaeological sites and nine historic built resources occur within the area of indirect effect. A complete list of cultural resources that are located within the APE for direct effects is provided in Appendix X.

A final draft cultural resources report (*Revised Class III Confidential Cultural Resources Technical Report, Application for Certification (08-AFC-13), SES Calico Solar, LLC*, prepared by URS Corporation, May 7, 2010) has been submitted by the Applicant that presents the results of identification efforts to the BLM. The BLM is currently reviewing all documentation to determine whether the report conforms with the field methodology and site description template required by BLM and the Energy Commission and is adequate to support the determinations and findings the agency's will render pursuant to section 106 of the NHPA.

## **APPENDIX G: AGENCY FINDINGS AND DETERMINATIONS**

The BLM has consulted with SHPO on BLM's determinations of eligibility and findings of effect for the cultural resources that may be affected by this Project. As provided for in Stipulation III of this Agreement, BLM has rendered its determinations of eligibility on resources prior to the ROD and has provided an opportunity for consulting parties and the public to comment on the agency's determinations, prior to submitting final determinations to the SHPO for concurrence. Documentation of the BLM's consultations is provided as part of the Appendix.



**United States Department of the Interior**  
**BUREAU OF LAND MANAGEMENT**

**Barstow Field Office**  
**2601 Barstow Road**  
**Barstow, CA 92311**  
**[www.blm.gov/ca/barstow](http://www.blm.gov/ca/barstow)**



*In Reply Refer To:*  
8100 (P)  
CA-47740  
CAD0800.34

Milford Wayne Donaldson  
State Historic Preservation Officer  
California Office of Historic Preservation  
PO Box 942896  
Sacramento, CA 94926-0001

Dear Mr. Donaldson:

The Bureau of Land Management, Barstow Field Office (BLM) would like to consult with the California State Historic Preservation Office (SHPO) on our agency's determinations and findings for the proposed Tessera Calico Solar project located in an undeveloped area of eastern San Bernardino County, California on public lands in the Central Mojave Desert, approximately 37 miles east of Barstow, California, and north of Interstate Highway 40 (I-40). The Project is located on public land managed by BLM, Barstow Field Office

The Project Area of Potential Effect (APE) originally consisted of approximately 8,230 acres. The project APE has been reduced to 6,215 acres as a result of project redesign to avoid three eligible historic properties which are now outside the proposed project. We are requesting consultation pursuant to Section V.E.2 of the *State Protocol Agreement*<sup>1</sup> which provides for review of evaluations as an element of your oversight role in the *State Protocol Agreement*.

BLM is currently reviewing an application by Tessera Calico Solar, for a right-of-way and approval to construct a solar generation facility on public land. The current proposed solar project covers 6,215 acres. Ground disturbing activities associated with the project include construction of access and/or utility roads, the construction of Sterling engines and a sub-station.

URS San Diego conducted a cultural resources investigation in support of the proposed solar project. The Project APE is an irregularly shaped area north of I-40 and primarily east of Hector Road. The southern Project APE borders I-40; the western Project APE borders open undeveloped BLM land; the eastern and southeastern project APE borders the transmission line, and portions of the eastern and northern project APE borders the base of the Cady Mountains. The Burlington Northern and Santa Fe (BNSF) Railway (formerly the Atlantic and Pacific/Atchison, Topeka, and Santa Fe Railroad [AP/ATSF]) ROW bisects the northern and

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<sup>1</sup> *State Protocol Agreement among the California State Director of the Bureau of Land Management and the California State Historic Preservation Officer and the Nevada State Historic Preservation Officer regarding the manner in which the Bureau of Land Management will Meet Its Responsibilities under the National Historic Preservation Act and the National Programmatic Agreement among the BLM, the Advisory Council on Historic Preservation and the National Conference of State Historic Preservation Officers (October 2007)*

southern portions of the Project APE on lands managed by the U.S. Bureau of Land Management (BLM).

The investigation was conducted in two phases: Between August and October 2008, all accessible areas within the Project APE were intensively surveyed and all resources identified were recorded on Department of Parks and Recreation (DPR) forms and mapped into a mobile sub-meter accuracy geographic information system (GIS).

In response to BLM and CEC data requests, additional field work was conducted between October 2009 and March 2010. URS with oversight by LSA, conducted a resurvey of the southern portion of the project area. In October 2009, 25 percent of the total number of sites within the Project APE were revisited and re-recorded. Concurrent with that effort, geo-archaeological studies were completed of areas within the Project APE. Between January and March 2010, the remaining 75 percent of the sites within the Project APE were revisited and re-recorded. Surveys were completed March 1, 2010.

The BLM has completed site determinations for the 116 sites within the APE. There are an additional 3 sites included in the report that are now outside the reduced APE. Tribes requested that these sites be evaluated by the BLM for nomination to the National Register and are included in the site determinations. The BLM had determined that these three sites are eligible but there will be no effect to these properties as they are now outside the project area.

### **Status of Consultation with Native American Tribes**

With the filing of the application for a right-of-way, BLM took the lead for formal tribal consultation pursuant to the National Historic Preservation Act as well as other laws and regulations. We initiated formal government-to-government consultation in the early stages of project planning by letter November 5, 2008 and have followed up with an additional letter and other information since then.

To date, eight tribes have been identified and invited to consult on this project. General informational meetings about the project were held on November 10, 2009. We have responded to four requests for formal meetings with tribes including the San Manuel Band of Mission Indians, Twenty-nine Palms Band of Mission Indians and the Chemehuevi Reservation and Fort Mojave Reservation. We have also received some written comments from tribal governments.

### **Site Determinations**

The BLM has determined that the identification efforts, reports, and the consultant's recommendations for this undertaking are adequate to identify historic properties that may be located within the APE and to support BLM's decision process. Based on the information and analysis, the results of tribal consultation, and the recommendations of the professional consultants, the BLM has made the following determinations regarding eligibility and findings of effect for cultural resources located within the APE for inclusion on the NRHP:

**Table 5.3-1: Archaeological Site Determination of Eligibility**

Site Designation	Cultural Context	Site Taxonomy	Location within Project APE	Geomorphic Landform	Potential for Buried Deposits Based on Geomorphic Landform	URS/LSA Eligibility Recommendation	Bureau of Land Management Eligibility Determination
CA-SBR-1908/H UPDATE	Multi-Component	Lithic Reduction Scatter, Rock Cluster Features, Historical Refuse, Fire Affected Rocks, and/or Hearths	Phase 2	Erosional Fan Remnant/Inset Fan	Very Low to Low	Rock Features are Recommended Eligible; prehistoric lithic reduction loci are non-contributing	Rock Features are Eligible; prehistoric lithic reduction loci are non-contributing Eligible portion of site removed from project area through project redesign.
CA-SBR-3076 UPDATE (EJK-021)	Prehistoric	Complex Lithic Scatter	Phase 2	Relict Alluvial Flat/ Inset fan/ Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-4558H UPDATE (Logan Mine)	Historic	Historical Refuse, Historical Mining Site, Historical Structure	Phase 1	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-4681/H UPDATE (RAN-102/H)	Multi-Component	Complex Lithic Scatter, Historical Survey/Mapping Features	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-5600 UPDATE (RAN-189)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant/ Inset Fan/ Pisgah Lava	None to Low	Recommended Not Eligible	Not Eligible
CA-SBR-5796 UPDATE (DRK-180)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible

CA-SBR-6521 UPDATE (RAN-115)	Prehistoric	Lithic Reduction Scatter, Rock Features	Phase 2	Erosional Fan Remnant/Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-6528 UPDATE (RSS-020)	Prehistoric	Complex Lithic Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Eligible	Not Eligible
CA-SBR-12990 (DRK-001)	Prehistoric	Lithic Reduction Scatter	200-Foot Buffer	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-12991 (DRK-012)	Prehistoric	Lithic Reduction Scatter	Phase 1	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-12992H (DRK-021H)	Historic	Historical Refuse	200-Foot Buffer	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-12993 (DRK-023)	Prehistoric	Lithic Reduction Scatter	Phase 2	Upper Alluvial Fan Piedmont	Low	Recommended Not Eligible	Not Eligible
CA-SBR-12994 (DRK-026)	Prehistoric	Lithic Reduction Scatter	200 Foot Buffer	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13002/C A-SBR-13003/H (DRK-134/DRK-136/H)	Multi-Component	Lithic Reduction Scatter, Historical Refuse, Fire Affected Rocks, and/or Hearths	Phase 2	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13004 (DRK-139)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13005 (DRK-140)	Prehistoric	Complex Lithic Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13006 (DRK-141)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible

CA-SBR-13007 (DRK-142)	Prehistoric	Complex Lithic and Groundstone Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Eligible	Not Eligible
CA-SBR-13008 (DRK-145)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13009 (DRK-150)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13010 (DRK-152)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13011 (DRK-153)	Prehistoric	Complex Lithic Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13012H (DRK-155H)	Historic	Historical Refuse, Fire Affected Rocks, and/or Hearths	Phase 2	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13013 (DRK-160)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant/Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13014H (DRK-163H)	Historic	Historical Refuse	Phase 2	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13015 (DRK-166)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13016 (DRK-167)	Prehistoric	Lithic Reduction Scatter	Phase 2	Axial Channel	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13017H (DRK-168H)	Historic	Historical Refuse	Phase 2	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13020 (DRK-173)	Prehistoric	Lithic Reduction and Groundstone Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible

CA-SBR-13021 (DRK-174)	Prehistoric	Lithic Reduction Scatter and Possible Hearth	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13022/C A-SBR-13024 (DRK-175/DRK-177)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13025 (DRK-178)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13026 (DRK-182)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant/Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13027 (DRK-184)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13028 (KRM-002)	Prehistoric	Lithic Reduction Scatter	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13029 (KRM-003)	Prehistoric	Lithic Reduction Scatter	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13030 (KRM-008)	Prehistoric	Lithic Reduction Scatter	Phase 2	Upper Alluvial Fan Piedmont/ Lower Alluvial Fan Apron	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13031 (KRM-024)	Prehistoric	Trail	Phase 2	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13032 (KRM-028)	Prehistoric	Trail	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible

CA-SBR-13038/C A-SBR-13040/H (KRM-160/KRM-167/H)	Prehistoric	Lithic Reduction Scatter and Rock Cluster Features	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13039 (KRM-164)	Prehistoric	Lithic Reduction Scatter and Rock Ring Feature	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13041 (KRM-170)	Prehistoric	Complex Lithic Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13042 (LTL-008)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13044 (LTL-011)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13045 (LTL-012)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13046 (LTL-015)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13047 (LTL-016)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13048 (LTL-017)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13049 (LTL-018)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13050 (LTL-019)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13051 (LTL-022)	Prehistoric	Lithic Reduction Scatter	Phase 2	Pisgah Lava	None to Very Low	Recommended Not Eligible	Not Eligible

CA-SBR-13052 (LTL-023)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan Pisgah Lava	None to Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13053 (RAN-011)	Prehistoric	Lithic Reduction Scatter	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13054 (RAN-025)	Prehistoric	Lithic Reduction Scatter	Phase 1	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13055 (RAN-101)	Prehistoric	Lithic Reduction Scatter and Rock Cluster Features	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13056 (RAN-108)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13059 (RAN-114)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13060 (RAN-116)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13061/C A-SBR-13076 (RAN-118/RAN-173)	Prehistoric	Lithic Reduction Scatter, Rock Cluster Features, and Historical Refuse	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13062 (RAN-120)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13063/H (RAN-123/H)	Multi-Component	Lithic Reduction Scatter, Rock Cluster Features, and Historical Refuse	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13064 (RAN-128)	Prehistoric	Lithic Reduction Scatter and Rock Cluster Features	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible

CA-SBR-13065 (RAN-131)	Prehistoric	Lithic Reduction Scatter	Phase 2	Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13066 (RAN-138)	Prehistoric	Lithic Reduction Scatter and Historical Refuse	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13068 (RAN-146)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13069 (RAN-154)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13070/C A-SBR-13067/H (RAN-155/RAN-139/H)	Multi-Component	Lithic Reduction Scatter, Historical Refuse, Fire Affected Rocks, and/or Hearths	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13071 (RAN-163)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13072 (RAN-168)	Prehistoric	Lithic Reduction Scatter	Phase 2	Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13073 (RAN-169)	Prehistoric	Complex Lithic Scatter	Phase 2	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13074 (RAN-170)	Prehistoric	Complex Lithic Scatter	Phase 2	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13075 (RAN-171)	Prehistoric	Complex Lithic Scatter	Phase 2	Lower Alluvial Fan Apron Axial Channel	Very Low to Moderate	Recommended Eligible	Not Eligible
CA-SBR-13078 (RAN-177)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible

CA-SBR-13079 (RAN-179)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13080 (RAN-180)	Prehistoric	Lithic Reduction Scatter	Phase 2	Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13081 (RAN-181)	Prehistoric	Lithic Reduction Scatter	Phase 2	Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13082 (RAN-183)	Prehistoric	Lithic Reduction Scatter and Rock Cluster Features	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13083 (RAN-186)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13084 (RAN-188)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant/Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13085 (RAN-190)	Prehistoric	Lithic Reduction Scatter and Rock Cluster Features	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13086 (RSS-005)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13089 (RSS-009)	Prehistoric	Lithic Reduction Scatter	Phase 2	Axial Channel/Relict Alluvial Flat	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13091 (RSS-013)	Prehistoric	Lithic Reduction Scatter	Phase 2	Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13092 (RSS-014)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible

CA-SBR-13093/H (RSS-017/H)	Multi-Component	Complex Lithic Scatter and Rock Cluster Features	Phase 2	Erosional Fan Remnant/Axial Channel/Inset Fan	Very Low to Moderate	Rock Features and Cleared Areas are Recommended Eligible; complex lithic scatters are non-contributing	Rock Features and Cleared Areas are Eligible; complex lithic scatters are non-contributing Eligible portion of site removed from project area through project redesign.
CA-SBR-13094 (RSS-018)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13096 (SGB-013)	Prehistoric	Lithic Reduction Scatter	Phase 1	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13097 (SGB-017)	Prehistoric	Lithic Reduction Scatter	Phase 1	Lower Alluvial Fan Apron	Low	Recommended Not Eligible	Not Eligible
CA-SBR-13104 (SGB-041)	Prehistoric	Lithic Reduction Scatter	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13105 (SGB-097)	Prehistoric	Lithic Reduction Scatter	Phase 2	Rock Outcrop within the Upper Alluvial Fan Piedmont	None to Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13106 (SGB-099)	Prehistoric	Lithic Reduction Scatter and Fire Affected Rocks and/or Hearths	Phase 2	Rock Outcrop within the Upper Alluvial Fan Piedmont	None to Very Low	Recommended Not Eligible	Not Eligible

CA-SBR-13107 (SGB-104)	Prehistoric	Lithic Reduction Scatter	Phase 2	Rock Outcrop within the Upper Alluvial Fan Piedmont	None to Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13111 (SGB-120)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13122 (KRM-165)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13123 (EJK-002)	Prehistoric And Historic	Lithic Reduction Scatter and Historical Refuse	Phase 2	Relict Alluvial Flat/Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13124/H (EJK-004/H)	Multi-Component	Lithic Reduction Scatter and Historical Refuse	Phase 2	Relict Alluvial Flat/Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
CA-SBR-13125/H (EJK-005/H)	Multi-Component	Lithic Reduction Scatter and Historical Refuse	Phase 2	Relict Alluvial Flat	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13126/H (EJK-009/H)	Multi-Component	Complex Lithic Scatter, Rock Cluster Features, and Historical Refuse	Phase 2	Axial Channel/Relict Alluvial Flat	Very Low to Moderate	Recommended Eligible; parts of the site within the APE are non-contributing	Recommended Eligible; parts of the site within the APE are non-contributing
CA-SBR-13349/H (RSS-006/SGB-112/SGB-114/SGB-118/SGB-127/H)	Multi-Component	Complex Lithic, Groundstone Scatter, and Historical Refuse	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13441 (RAN-107/RAN-110)	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible

CA-SBR-13442 (DRK-133/LTL-009)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant/Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
CA-SBR-13443/H (DRK-176/RAN-175/H)	Multi-Component	Complex Lithic, Groundstone Scatter, and Historical Refuse	Phase 2	Axial Channel	Very Low to Moderate	Prehistoric Component Recommended Eligible; historic component non-contributing	Prehistoric Component is Eligible; historic component non-contributing Eligible portion of site is outside the project area through project redesign.
CA-SBR-13444 (DRK-170/DRK-171)	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
CA-SBR-13445 (RSS-008/RSS-011)	Prehistoric	Complex Lithic Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
DRK-S1-001H	Historic	Trail	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
MN-S1-001	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
MN-S1-004	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
MN-S1-005	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
MN-S1-009	Prehistoric	Lithic Reduction Scatter	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible
MN-S1-017H	Historic	Historical Refuse	Phase 2	Axial Channel	Very Low to Moderate	Recommended Not Eligible	Not Eligible
NOTR-PRM-S1-002/H	Multi-Component	Lithic Reduction Scatter and Historical Refuse	Phase 2	Erosional Fan Remnant	Very Low	Recommended Not Eligible	Not Eligible

PRM-S1-009	Prehistoric	Lithic Reduction Scatter	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
PRM-S1-021H	Historic	Rock Cluster Features and Historic Survey/Mapping Features	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
P36-014578 (RAN-035)	Indeterminate	Rock Cluster Features	Phase 2	Upper Alluvial Fan Piedmont	Very Low	Recommended Not Eligible	Not Eligible
P17P3-1H (RAN-050/H)	Historic	Historical Refuse	Phase I	Axial Channel	Low	Recommended Not Eligible	Not Eligible
SM-S1-001	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible
SM-S1-003	Prehistoric	Lithic Reduction Scatter, Fire Affected Rocks, and/or Hearths	Phase 2	Inset Fan/Erosional Fan Remnant	Very Low to Low	Recommended Not Eligible	Not Eligible
SM-S1-005	Prehistoric	Lithic Reduction Scatter	Phase 2	Inset Fan	Very Low to Low	Recommended Not Eligible	Not Eligible

## Finding

CA-SBR-13126 has been determined eligible for the National Register and California Register under criteria D/4. The site extends into the SW boundary of the project area. Subsurface testing was conducted in the portion of the site within the project area. This portion of the site consists of lithic scatter with no subsurface component. It has been determined that the portion of the site within the APE is not a contributing factor to site eligibility.

Three sites, CA-SBR-1908/H, CA-SBR-13093/H, and CA-SBR-13443/H have been determined eligible for inclusion to the National Register under criteria D/4. These three sites are now outside the APE with a 400 ft. buffer through project redesign.

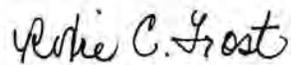
The BLM is issuing a finding of no adverse effect to historic properties.

The BLM is submitting an electronic copy of the final report and site records as for your review of site determinations.

Pursuant to our request for your office to review our evaluations as an element of your oversight role in the *State Protocol Agreement*, BLM is requesting your concurrence in our determinations and findings for this undertaking.

If you have any questions or need additional information about this undertaking, please don't hesitate to contact Jim Shearer, staff archaeologist, at (760) 252-6034 or by email to [jshearer@blm.gov](mailto:jshearer@blm.gov). Thank you for your assistance in this matter.

Sincerely,



Roxie C. Trost  
Field Manager

Enclosures: Technical report and Appendices on 3 CDs

cc: electronically

Rolla Queen  
Charlotte Hunter  
Jim Stobaugh

**OFFICE OF HISTORIC PRESERVATION  
DEPARTMENT OF PARKS AND RECREATION**

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August 25, 2010

Reply to: BLM100721A

Roxie C. Trost  
Bureau of Land Management  
Barstow Field Office  
2601 Barstow Road  
Barstow, CA 92311

RE: Tessera Calico Solar Project

Dear Ms. Trost:

Thank you for requesting my comments on the above cited undertaking. As noted in your letter the undertaking originally consisted of approximately 8,239 acres but has been reduced to 6,215 acres to avoid adverse effects to three eligible historic properties. I feel this was an important step you made to take the effects of the undertaking to historic properties into account.

You have asked my consensus in your determinations of eligibility and affect even though not required to do so as provided in the Bureau of Land Management (BLM) National Programmatic Agreement as implemented through BLMs 8100 Manual. The manual allows for BLM to make unilateral determinations of eligibility for properties to the National Register of Historic Places,

As a procedural means for addressing your request and as discussed with your staff on August 10, 2010 in Barstow, I recommend that you execute a Programmatic Agreement (PA) for this undertaking to govern its implementation. I feel a PA developed pursuant to the Advisory Council on Historic Preservation's Procedures found at 36 CFR Part 800.14(b)(1) is the best means for taking effects to historic properties into account and addressing any unanswered questions regarding eligibility. It is my understanding your staff has agreed to prepare a draft PA and will circulate it for comment. I know we have a very tight schedule for completing the consultation process and I also am aware that this procedural recommendation is presented late in the process thus I am prepared to work with you in the preparation of the PA to meet your deadlines.

In your request you provided a copy of the URS cultural resources investigation report. In addition you indicate BLM has completed site determinations of eligibility for the 116 sites within the undertakings area of potential effect. You requested my concurrence in these determinations.

I concur with your determinations that historic properties CA-SBR-13126, CA-SBR-1908/H, CA-SBR-13093/H and CA-SBR-13443/H are eligible for the National Register of Historic Places under criterion D. All sites but property CA-SBR-13126 have been removed from the undertakings area of potential effect. The portion of CA-SBR-13126 that extends into the APE

consists of a lithic scatter you archeologically tested with no subsurface component and you correctly determined did not contribute to its eligibility.

For the remaining properties that are located within the undertakings area of potential effect you have concluded all do not meet the criteria for the National Register. I neither agree or disagree with your determination. From surface archeological manifestations I believe you are correct. The only means for these properties to meet the National Register criteria is if a subsurface component with more significant data and complexity than shown on the surface is present.

I have considered a number of criteria for determining which sites would most likely contain such subsurface significant data and the most appropriate means for recovering this information. I note in your staff evaluation, you also provided a similar analysis. One such means might be the use of a method similar to the one outlined in the *California Archaeological Resource Identification and Data Acquisition Program: Sparse Lithic Scatters*. The problem is that such an approach may not provide an adequate sample to determine if there is sufficient data to fully evaluate the eligibility of the sites in question even if a subsurface component was noted. The excavation conducted for the All American Pipeline project produced very little data given the volume of cultural material excavated and analyzed.

My staff also reviewed and considered a paper recommended by Dr. Dave Whitley representing CURE entitled *Desert Pavement and Buried Archaeological Features in the Arid West: A Case Study from Southern Arizona*. In the closing of the article it notes and I quote "...not enough work has been conducted on some sites located in the desert pavement setting....we recommend that archaeologists, as well as government agencies, keep an open mind to the possibility of buried cultural features and deposits... The next line which states, "We can also note that mechanical surface stripping provides one, and perhaps the only, cost effective means of looking for such cultural remains under desert pavement." It is this conclusion which leads me to the following recommendations. It is my understanding that you will propose the development of a construction monitoring plan and a post review discovery plan which could be the deliverables required in a PA and as such would allow the use of 36 CFR 800.13(a) rather than the procedural requirements for seeking the Advisory Council's comments as provided in 36 CFR 800.13(b).

I am proposing that the monitoring plan provide for systematic stripping of the top 20 cm of soil within the site boundaries of known sites. If no subsurface component of the site is noted, construction monitoring would continue. If a subsurface component is noted, BLM would determine if work stoppage at this location should occur and if additional archeological work is warranted. The plan would then provide a research design and methodology for retrieving such data. The plan would also provide the threshold when the number and type of sites have been subject to these controlled procedures that continuance is either warranted or should be discontinued.

It is my conclusion that while we do not disagree with your determination that the remaining sites are not eligible, it has not been fully demonstrated that the sites in question do not include a subsurface archeological component which might change your eligibility determinations. However, it may be like finding a needle in a haystack to either demonstrate that such data either exist or does not exist. I hope you will give careful consideration to this proposal.

Finally, with regards to Route 66 it is my recommendation that the nine mile segment of roadway that parallels the undertaking retains sufficient integrity of construction and setting

that it would contribute to the significance of a Route 66 National Register eligible district. It appears that if both phases of the undertaking were built, the undertaking would adversely affect this historic property. Based on the topography, it is not as clear what effect would result from construction of phase 1 of the undertaking. Specific simulations were not made to address potential effects to Route 66 much less by phases. It does not appear there is a physical means to mitigate the adverse effect. I am open to your recommendations as to how to take effects into account.

I look forward to continuing consultation. If you propose to proceed with the development of a PA to guide this project, I am prepared to so execute. I hope these comments are helpful. If you have any questions, please contact Dwight Dutschke at 916-445-7010.

Sincerely,



Milford Wayne Donaldson, FAIA  
State Historic Preservation Officer

## APPENDIX H: DOCUMENTATION OF TRIBAL CONSULTATION

### *Major Tribal Consultation Events and Contacts: January 2008 through April 2010*

<b>Tribal Group or Contact</b>	<b>Date</b>	<b>Subject</b>	<b>Comments</b>
Chemehuevi Reservation: Ms. Irene Anthony, Tribal Administrator	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Chemehuevi Reservation: Ms. Cara McDonald	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
San Manuel Band of Mission Indians: Ms. Ann Brierty	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Colorado River Indian Tribe Ms. Mamie Harper	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Colorado River Indian Tribe Mr. David Harper	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Mr. Darryl King, Tribal Council Member	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Chemehuevi Indian Tribe Mr. Darryl King, Tribal Council Member	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Twenty-nine Palms Band of Mission Indians Mr. Anthony Madrigal, Sr., Cultural Director	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Chemehuevi Indian Tribe Mr. David Todd, Director	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Colorado River Indian Tribe Dr. Michael Tsosie, Director	8/20/2007	Desert District Tribal Letter all energy projects	Includes Solar One
Fort Mojave Indian Tribe: Ms. Linda Otero	8/20/2007	Desert District Tribal Letter all energy projects	Letters sent
Colorado River Indian Tribes: Mr. Mike Tsosie	11/5/2008	Sterling Solar One Tribal Consult Invite Letter	Letters sent
Fort Mojave Indian Tribe: Ms. Linda Otero	11/5/2008	Sterling Solar One Tribal Consult Invite Letter	Letters sent
Fort Mojave Indian Tribe: Mr. Timothy Williams	11/5/2008	Sterling Solar One Tribal Consult Invite Letter	Letters sent
Morongo Band of Mission Indians: Mr. Michael Contreras	11/5/2008	Sterling Solar One Tribal Consult Invite Letter	Letters sent
San Manuel Band of Mission Indians: Ms. Ann Brierty	11/5/2008	Sterling Solar One Tribal Consult Invite Letter	Letters sent
San Manuel Band of Mission Indians: Ms.Mr. James Ramos	11/5/2008	Sterling Solar One Tribal Consult Invite Letter	Letters sent
Twenty-nine Palms Band of Mission Indians: Mr. Darrell Mike	11/5/2008	Sterling Solar One Tribal Consult Invite Letter	Letters sent
Chemehuevi Reservation: Mr. Charles Wood	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	No concerns at this time
Chemehuevi Reservation: Ms. Cara McDonald	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	No concerns at this time want copy of cultural report

<b>Tribal Group or Contact</b>	<b>Date</b>	<b>Subject</b>	<b>Comments</b>
Colorado River Indian Tribes: Mr. Mike Tsosie	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	Phone message
Fort Mojave Indian Tribe: Ms. Linda Otero	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	Phone message
Fort Mojave Indian Tribe: Mr. Timothy Williams	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	Phone message
Morongo Band of Mission Indians: Mr. Michael Contreras	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	Phone message
Morongo Band of Mission Indians: Mr. Robert Martin	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	No concerns at this time want copy of cultural report
San Manuel Band of Mission Indians: Ms. Ann Brierty	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	No concerns at this time want copy of cultural report
San Manuel Band of Mission Indians: Ms.Mr. James Ramos	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	Phone message
Twenty-nine Palms Band of Mission Indians: Mr. Darrell Mike	12/16/2008	Sterling Solar One Tribal Consult Follow up Call	Phone message
San Manuel, Soboba, Morongo, 29 Palms, Torres Martinez, Cahuilla	5/20/2009	Sterling Solar One and other energy projects	District meeting with Inter-tribal working group Energy Fast Track Projects
San Manuel Band of Mission Indians: Ann Brierty	11/10/2009	Sterling Solar One and other energy projects	Discussed fast track energy projects
Colorado River Indian Tribes: Mr. Mike Tsosie	3/25/2010	Calico Solar Tribal update letter	Letters sent
Fort Mojave Indian Tribe: Ms. Linda Otero	3/25/2010	Calico Solar Tribal update letter	Letters sent
Fort Mojave Indian Tribe: Mr. Timothy Williams	3/25/2010	Calico Solar Tribal update letter	Letters sent
Morongo Band of Mission Indians: Mr. Michael Contreras	3/25/2010	Calico Solar Tribal update letter	Letters sent
Morongo Band of Mission Indians: Mr. Robert Martin	4/13/2010	Calico Solar Tribal update letter	Letters sent
San Manuel Band of Mission Indians: Ms. Ann Brierty	3/25/2010	Calico Solar Tribal update letter	Letters sent
San Manuel Band of Mission Indians: Mr. James Ramos	3/25/2010	Calico Solar Tribal update letter	Letters sent
Twenty-nine Palms Band of Mission Indians: Mr. Darrell Mike	3/25/2010	Calico Solar Tribal update letter	Letters sent
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	3/25/2010	Calico Solar Tribal update letter	Letters sent
Chemehuevi Reservation: Ms. Cara McDonald	3/25/2010	Calico Solar Tribal update letter	Letters sent
Colorado River Indian Tribes: Mr. Mike Tsosie	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
Fort Mojave Indian Tribe: Ms. Linda Otero	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
Fort Mojave Indian Tribe: Mr. Timothy Williams	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
Morongo Band of Mission Indians: Mr. Robert Martin	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent

<b>Tribal Group or Contact</b>	<b>Date</b>	<b>Subject</b>	<b>Comments</b>
Morongo Band of Mission Indians: Mr. Michael Contreras	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
San Manuel Band of Mission Indians: Ms. Ann Brierty	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
San Manuel Band of Mission Indians: Mr. James Ramos	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
Twenty-nine Palms Band of Mission Indians: Mr. Darrell Mike	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
Chemehuevi Reservation: Mr. Charles Wood	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
Chemehuevi Reservation: Ms. Cara McDonald	4/13/2010	Calico Solar Tribal PA Invite letter	Letters sent
San Manuel Band of Mission Indians: Ann Brierty	4/29/2010	Calico Solar PA kick off meeting	Discussed Calico Solar PA
San Manuel Band of Mission Indians: Anthony Madrigal	4/29/2010	Calico Solar PA kick off meeting	Discussed Calico Solar PA
San Manuel Band of Mission Indians: Call to Ann Brierty	5/14/2010	Calico Solar Site visit with Elders Logistics	Discussed possible dates
San Manuel Band of Mission Indians: Email from Ann Brierty	5/14/2010	Calico Solar Site visit with Elders Logistics	Discussed possible dates
San Manuel Band of Mission Indians	5/14/2010	Cultural issues with Calico sites	Discussed Calico Solar PA and status of Cultural Report. Also discussed arrangements for site visit with Elders.
Fort Mojave (call to Linda Otero)	5/14/2010	Cultural issues with Calico sites	Discussed Calico Solar PA and status of Cultural Report. Also discussed arrangements for site visit with Elders.
San Fernando Band of Mission Indians	5/19/2010	Calico Solar Site visit with Elders	No answer on cell and home
Chemehuevi	5/19/2010	Calico Solar Site visit with Elders	Left message with receptionist.
San Fernando Band of Mission Indians	5/19/2010	Calico Solar Site visit with Elders	Spoke with John. Said he would attend
San Manuel Band of Mission Indians	5/21/2010	Calico Solar Site visit with Elders	Spoke with Ann Brierty about site visit logistics and possible avoidance of rock feature sites.
San Manuel Band of Mission Indians	5/25/2010	Calico Solar Site visit with Elders Logistics	Discussed dates for visit tentative for June 8, 2010
San Manuel Band of Mission Indians	5/25/2010	Calico Solar Site visit with Elders Logistics	Discussed dates for visit now June 13,2010
San Manuel Band of Mission Indians	5/25/2010	Calico Solar Site visit with Elders Logistics	Discussed dates for visit now June 13,2010

<b>Tribal Group or Contact</b>	<b>Date</b>	<b>Subject</b>	<b>Comments</b>
San Manuel Band of Mission Indians: Email from Ann Brierty	5/25/2010	Calico Solar Site visit with Elders Logistics	San Manuel Band of Mission Indians: Date set for site visit, 6/13/10
San Manuel Band of Mission Indians	6/2/2010	Calico Solar Site visit with Elders Logistics	Discussed dates for visit now June 13,2010
Twenty-nine Palms Band of Mission Indians (phone call w/Anthony Madrigal)	6/2/2010	Calico Solar Site visit with Elders Logistics	Discussed dates for visit now June 13,2010 Matt and June Laibas will be representing
San Manuel Band of Mission Indians	6/4/2010	Calico Solar Site visit with Elders Logistics	Discussed dates for visit now June 13,2010 hotel, attendees, time, thoughts on no PA and redesign to avoid 3 sites
Fort Mojave (call from Linda Otero)	6/9/2010	Calico Solar Site visit with Elders Logistics	Discussed dates for visit now June 13,2010 hotel, attendees, time, thoughts on no PA and redesign to avoid 3 sites
San Manuel Band of Mission Indians: Ms. Ann Brierty	6/13/2010	On site visit with Elders	Visited proposed eligible sites that Tessera has redesigned project foot print to avoid.
San Manuel Band of Mission Indians: Mr Anthony Madrigal	6/13/2010	On site visit with Elders	Visited proposed eligible sites that Tessera has redesigned project foot print to avoid.
San Manuel Band of Mission Indians: Mr Raymond Oalvan	6/13/2010	On site visit with Elders	Visited proposed eligible sites that Tessera has redesigned project foot print to avoid.
Fort Mojave Tribe Mrs Linda Otero	6/13/2010	On site visit with Elders	Visited proposed eligible sites that Tessera has redesigned project foot print to avoid.
Chemehuevi: Mr. Robert Chavez	6/13/2010	On site visit with Elders	Visited proposed eligible sites that Tessera has redesigned project foot print to avoid.
Chemehuevi: Mr. Domingo C. Esquerria	6/13/2010	On site visit with Elders	Visited proposed eligible sites that Tessera has redesigned project foot print to avoid.
Chemehuevi: Mr. Matthew Leivas Sr.	6/13/2010	On site visit with Elders	Visited proposed eligible sites that Tessera has redesigned project foot print to avoid.
Fort Mojave Indian Tribe: Ms. Linda Otero	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Fort Mojave Indian Tribe: Mr. Timothy Williams	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Morongo Band of Mission Indians: Mr. Robert Martin	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Morongo Band of Mission Indians: Mr. Michael Contreras	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
San Manuel Band of Mission Indians: Ms. Ann Brierty	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.

<b>Tribal Group or Contact</b>	<b>Date</b>	<b>Subject</b>	<b>Comments</b>
San Manuel Band of Mission Indians: Mr. James Ramos	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Twenty-nine Palms Band of Mission Indians: Mr. Darrell Mike	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Chemehuevi Reservation: Mr. Charles Wood	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Chemehuevi Reservation: Ms. Cara McDonald	6/18/2010	Calico Solar Tribal PA letter	Letters w/ Draft PA/ report summary/ proposed site determinations sent.
Fort Mojave Indian Tribe: Ms. Linda Otero	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
Fort Mojave Indian Tribe: Mr. Timothy Williams	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
Morongo Band of Mission Indians: Mr. Robert Martin	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
Morongo Band of Mission Indians: Mr. Michael Contreras	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
San Manuel Band of Mission Indians: Ms. Ann Brierty	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
San Manuel Band of Mission Indians: Mr. James Ramos	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Anthony suggested 500 ft. buffer or possible NRHP nomination
Twenty-nine Palms Band of Mission Indians: Mr. Darrell Mike	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
Chemehuevi Reservation: Mr. Charles Wood	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
Chemehuevi Reservation: Mr Matt Levas	6/28/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Will have new cultural person contact me.
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	6/30/2010	Calico Solar Tribal PA letter follow up call	Informed Anthony that Tessera agreed to fence site and have consultant do NRHP registration
San Manuel Band of Mission Indians: Ms. Ann Brierty	7/1/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
San Manuel Band of Mission Indians: Mr. Anthony Madrigal	7/1/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	7/1/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message. Discussed actual project

Tribal Group or Contact	Date	Subject	Comments
			boundry distance
Chemehuevi Reservation: Mr. Charles Wood	7/1/2010	Calico Solar Tribal PA letter follow up call	Follow up call: Discussed fencing of site, boundry distances, and NRHP nomination
Morongo Band of Mission Indians: Mr. Michael Contreras	7/2/2010	Calico Solar Tribal PA letter follow up call	Follow up Call: Out of office, did leave message.
San Manuel Band of Mission Indians: Mr. Anthony Madrigal	7/2/2010	Calico Solar Tribal PA letter follow up call	Follow up call: Discussed fencing of site, boundry distances, and NRHP nomination
San Manuel Band of Mission Indians: Ms. Ann Brierty	7/2/2010	Calico Solar Tribal PA letter follow up call	Follow up call: Discussed fencing of site, boundry distances, and NRHP nomination. Ann will coordinate with other tribes.-
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	9/1/2010	Calico Solar Tribal meeting request	Phone call requesting a meeting with Tesera, URS and BLM with tribes
Fort Mojave Indian Tribe: Ms. Linda Otero	9/1/2010	Request for Calico Tech Report	Phone message requesting copy of Calico Solar Tech Report
Fort Mojave Indian Tribe: Ms. Linda Otero	9/1/2010	Request for Calico Tech Report	Follow up Call: Out of office, did leave message. Copy of Tech Report sent by URS
Twenty-nine Palms Band of Mission Indians: Anthony Madrigal Jr.	9/2/2010	Calico Solar Tribal meeting request reurn call	Phone call requesting a meeting with Tesera, URS and BLM with tribes scheduled for September 24, 2010

**APPENDIX I: EXAMPLE MONITORING AND DISCOVERY PLAN**

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**DRAFT EXAMPLE  
MONITORING AND DISCOVERY PLAN**

**IMPERIAL VALLEY SOLAR PROJECT  
IMPERIAL COUNTY, CALIFORNIA**

Submitted to:

Bureau of Land Management

1661 South 4th Street

El Centro, CA 92243

Prepared by:

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May 26, 2010

And

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August 13, 2010

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[table of contents](#)

<b>1.0</b>	<b>INTRODUCTION</b>	<b>81</b>
1.1	<i>PROJECT description</i>	81
1.2	<i>Regulatory Context</i>	82
1.3	<i>PROFESSIONAL QUALIFICATIONS</i>	82
1.4	<i>Key Personnel</i>	83
1.5	<i>DEFINITION OF RESOURCE TYPES</i>	84
<b>2.0</b>	<b>AVOIDANCE AND PRESERVATION</b>	<b>89</b>
2.1	<i>environmentally sensitive areas</i>	89
2.2	<i>Plan of ESA establishment and Designation</i>	89
<b>3.0</b>	<b>monitoring plan</b>	<b>92</b>
3.1	<i>Monitoring</i>	92
<b>4.0</b>	<b>DISCOVERY PLAN</b>	<b>96</b>
4.1	<i>Plan of Treatment of Discoveries</i>	96
<b>5.0</b>	<b>DATA MANAGEMENT and CURATION</b>	<b>101</b>
5.1	<i>TECHNICAL REPORT PREPARATION AND DISSEMINATION</i>	101
5.2	<i>CURATION IN PERPETUITY</i>	101

ATTACHMENTS

- A Specific Field and Analytical Methods
- B Daily Monitoring Log
- C Contact List

**LIST OF TABLES**

Table 1    Discovery Notification Procedures ..... 94

DRAFT

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## INTRODUCTION

Tessera Solar is proposing to construct the Imperial Valley Solar Project (IVSP or Project) in Imperial County on lands under the jurisdiction of the Bureau of Land Management (BLM), and cultural resources have been documented in the Project's area of potential effects (APE). Efforts are being made to design the Project to avoid known cultural resources eligible for listing in the National Register of Historic Places (NRHP) and/or the California Register of Historic Resources (CRHR). The following will be discussed in this Monitoring and Discovery Plan:

- The measures necessary to avoid potential impacts to recorded cultural resources, including Environmentally Sensitive Areas (ESAs)
- Professional standards
- Monitoring plan
- Discovery plan
- Avoidance/protection procedures
- Cultural resources training
- Curation

The entire surface of the APE of the proposed Project has been surveyed. Multiple prehistoric and historic resources have been identified.

## PROJECT DESCRIPTION

The IIVSP will construct a proposed 750-megawatt (MW) solar energy plant on approximately 6,500 acres of public lands in California administered by BLM California Desert District and the El Centro Field Office. Imperial Valley Solar will use existing roads and construct new roads in the Project area.

The Project is located in western Imperial County, California, immediately east of the town of Ocotillo, west of the town of Seeley, and north and south of Interstate 8 (I-8). The Project will utilize the SunCatcher technology of Stirling Energy Services. Each SunCatcher consists of a 25-kilowatt solar power electric-generating system. The system is designed to track the sun automatically and to focus solar energy onto a Power Conversion Unit, which generates electricity. The system consists of an approximate 38-foot-high by 40-foot-wide solar concentrator dish that supports an array of curved glass mirror facets. The 300-MW Phase I of the Project will consist of approximately 12,000 SunCatchers. The 450-MW Phase II portion of the Project will include approximately 18,000 SunCatchers.

The Project will include the construction of a new 230-kilovolt (kV) substation approximately in the center of the Project. A Main Services Complex, where key buildings and parking areas will be located, will be constructed at the northeastern end of

the Phase I Project. Main roads will be constructed with a combination of roadway dips and elevated sections across the dry washes on the Project.

The full Phase II expansion of the Project will require the construction of the 500-kV Sunrise Powerlink transmission line that San Diego Gas & Electric (SDG&E) has proposed. A 230-kV transmission line that will be built for Phase I will parallel the current transmission line corridor for the Southwest Powerlink transmission line within the existing right-of-way (ROW). The main entry for truck traffic to the Project during construction will be from I-8 to the Project entrance on Evan Hewes Highway. During Project operation, the secondary and emergency access will be from Dunaway Road.

## REGULATORY CONTEXT

The proposed Project requires authorization and issuance of an ROW grant by BLM. The proposed Project is a federal undertaking. Therefore, compliance with 36 Code of Federal Regulations (CFR) Part 800, regulations implementing the National Historic Preservation Act (as amended), is required. In addition, BLM and the California Energy Commission (CEC), together, have prepared the *Staff Assessment and Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment, SES Solar Two Project, and Application for Certification (08-AFC-5) Imperial County (2010)* to identify Project alternatives for purposes of the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), and have comparatively examined the relative effects of the alternatives on known historic properties. Therefore, cultural resources on the Project are evaluated subject to criteria of both the federal NRHP and CEQA CRHR. As the Project may have an adverse effect on historic properties (resources eligible for or listed in the NRHP and/or CRHR), BLM prepared a Programmatic Agreement (PA) stipulating measures that will be implemented prior to construction. The preparation of a Monitoring and Discovery Plan is stipulated in the PA.

## PROFESSIONAL QUALIFICATIONS

BLM shall ensure that all work is under the supervision of personnel meeting the *Secretary of the Interior's Standards and Guidelines* (as amended and annotated), *Professional Qualifications Standards*. The requirements are those used by the National Park Service, and have been previously published in the Code of Federal Regulations (36 CFR Part 61). The qualifications define minimum education and experience required to perform identification, evaluation, registration, and treatment activities. BLM shall obtain résumés of prospective consultants and verify credentials of supervisory personnel and staff, as necessary.

## ARCHAEOLOGY

The minimum professional qualifications for supervisory personnel in archaeology shall be a graduate degree in archaeology, anthropology, or closely related field plus the following:

- At least 1 year of full-time professional experience or equivalent specialized training in archaeological research, administration, or management;
- At least 4 months of supervised field and analytic experience in general North American archaeology; and
- Demonstrated ability to carry research to completion.

In addition to these minimum qualifications, a professional in prehistoric archaeology shall have at least 1 year of full-time professional experience at a supervisory level in the study of archaeological resources of the prehistoric period. A professional in historic archaeology shall have at least 1 year of full-time professional experience at a supervisory level in the study of archaeological resources of the historic period.

## KEY PERSONNEL

Personnel involved in the archaeological monitoring, testing, and data recovery efforts will be responsible primarily for conducting the monitoring; archaeological fieldwork and laboratory analysis; report preparation; and (as necessary) coordination with BLM, construction contractors, and Native American consultants. The responsibilities of key personnel are outlined below.

## PRINCIPAL INVESTIGATOR/CULTURAL RESOURCES SPECIALIST

The Principal Investigator (PI)/Cultural Resources Specialist (CRS) will have overall responsibility for the testing and data recovery investigations and will be the primary point of contact between the archaeological consultant and BLM for these programs. The PI will also be responsible for the analysis and the overall quality of the technical report of these investigations. The PI will meet the Secretary of the Interior's Qualification Standards for Archaeologists and be on the BLM Cultural Resources Use Permit.

## MONITORING SUPERVISOR

The Monitoring Supervisor will have overall responsibility for the cultural resources monitoring program and will be the primary point of contact between the archaeological consultant and BLM for this program. The Monitoring Supervisor will also be responsible for the content and the overall quality of the monitoring report. The Monitoring Supervisor will meet the Secretary of the Interior's Qualification Standards for Archaeologists.

## FIELD MONITORS

Field monitors will conduct the daily archaeological construction monitoring and will be responsible for making the initial discoveries, subsequent initial notifications, equipment diversions, preparing daily monitoring notes and logs, and recording and mapping for initial discovery documentation.

## FIELD DIRECTOR

The Field Director will be responsible for the day-to-day activities of the testing and data recovery investigations, including management of field personnel and coordination of crews. The Field Director will also be responsible for compiling and ensuring the quality of the field data on a daily basis. Additionally, the Field Director will coordinate the work of subconsultants or other contractors participating in the archaeological field investigations, and will be responsible for implementing the requirements of the Health and Safety Plan, including daily safety briefings. The Field Director will also meet the Secretary of the Interior's Qualification Standards for Archaeologists and be on the Cultural Uses Permit.

## CREW CHIEFS

The Crew Chiefs will, in consultation with the Field Director, be responsible for implementing the field strategies at individual sites. The Crew Chief will direct field crew, lay out excavations, and compile collections and field documentation on a daily basis. Additionally, the Crew Chief will be responsible for implementing on-site safety procedures.

## FIELD CREW

Field crew members will conduct surface examinations and hand excavations, and monitor mechanical test investigation excavations. Each crew member will operate under the direct supervision of the Crew Chief and will conduct basic documentation of field operations, including completing excavation-level records, bag labeling, and trench monitoring forms.

## LABORATORY DIRECTOR

The Laboratory Director will be responsible for directing all phases of laboratory processing of the data recovery collections, including check-in, cleaning, sorting, cataloguing, analyzing, distributing special samples, and preparing for curation. The Laboratory Director will coordinate closely with the PI and Monitoring Supervisor to ensure that the appropriate data are documented and compiled.

## 1.5 DEFINITION OF RESOURCE TYPES

Below are examples of archaeological site types that might be encountered in the Project APE during construction or additional surveys.

### PREHISTORIC

**HABITATION SITES.** Sites have, at a minimum, flaked stone tools and evidence of food processing and fire affected rock/hearths. Sites contain a wide variety of artifacts and materials. Habitation sites within the IVSP area may include flakes, tools, groundstone, ceramics, fire-affected rocks, midden, rock features (domestic and storage), and human remains.

- Temporary camp: flaked stone tools, evidence of food processing, fire affected rock/hearths
- Long-term: multiple artifact categories, evidence of use of fire, midden

**RESOURCE EXTRACTION/PROCESSING SITES.** Sites contain artifacts associated with specific resource extraction or processing activities. Processing/extraction sites within the IVSP include the following:

- Plant processing: Associated artifacts include groundstone, manos, metates, pestles, bedrock storage facilities, and bedrock milling features. Groundstone was also used to process fish, small animals, and pigments, and for hide-tanning. Flaked lithics were also used for cutting/harvesting plants prior to grinding or for preparing vegetal construction materials.
- Animal processing: associated artifacts include lithics, fish traps, and faunal bone
- Lithic reduction: associated artifacts include lithic tools, flakes, debitage, cores, and blanks
- Lithic processing: evidence of heat treatment; associated artifacts include flakes, debitage, and/or cores
- Groundstone production: associated artifacts or features include sandstone and granite outcrops, basalt boulders, etc.

**TRAVEL SITES.** Trails/footpaths, including trail markers.

**CERAMICS SITES.** These sites can include both scatters of ceramics and single pot locales or “pot drops.”

**ROCK FEATURES SITES.** These sites contain cairns, rock alignments, rock rings, and/or cleared circles.

**OTHER.** All other prehistoric sites that do not fit into the above categories.

## **HISTORIC**

**HABITATION SITES.** In addition to food-related refuse, these are sites that contain evidence of domestic activity. Features may include tent pads, cleared areas, campfire rings, foundations, or other evidence of more than casual use.

**HISTORIC REFUSE.** These sites contain primary or secondary refuse deposit or concentrations of debris.

- Food containers: primarily cans
- Beverage containers: bottles and cans
- Mixed domestic: in addition to food and beverage containers, a variety of materials such as crockery, glassware, buttons, wire, toys, etc.
- Construction: cement, milled lumber, nails, paint, tile, etc.
- Target practice: shell casings, fragmentary bullets, etc.

**GRAVEL EXTRACTION/MINING.** These sites are characterized by pits, scraping scars, rock piles, and/or access roads.

**SURVEYING.** These sites consist of trash piles associated with surveying activities and historic survey markers.

**TRANSPORTATION.** These sites are linear features designed to facilitate the transportation of people.

– Roads: unpaved

– Trails: wagon trails and footpaths

**MILITARY.** Any site associated with military activities.

**ROCK FEATURES.** Cairns, rock alignments, and/or rock rings.

**WATER CONVEYANCE.** Any subsurface feature or device constructed to transport water over a distance (irrigation canals, ditches, flumes, pipes, etc.) not associated or addressed as part of the built environment.

**OTHER.** All other sites that do not fit into the above categories.

## **BUILT ENVIRONMENT**

**HABITATION.** Standing residential buildings.

**INDUSTRIAL.** Standing processing or manufacturing plant.

**TRANSPORTATION.** Existing linear feature designed to facilitate the transportation of people.

– Roads: paved

– Railroads: with intact crossties and rails

**WATER CONVEYANCE.** Any existing feature or device constructed to transport water over a distance: irrigation canals, ditches, flumes, pipes, etc.

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## 2.0 AVOIDANCE AND PRESERVATION

Avoidance of all cultural resources is preferred and is the goal of BLM. If cultural resources are discovered during construction and they are determined eligible for listing in the NRHP and/or the CRHR, implementation of a data recovery program may be necessary. If avoidance and minimization alternatives are not feasible, then data recovery through archaeological excavation may be warranted. Archaeological sites are most often determined eligible for the NRHP under Criterion D (“have yielded or may be likely to yield, information important in prehistory or history”), and/or the CRHR under Criterion 4 (“potential to yield information important to the prehistory or history of the local area, California or the nation”). The important information can often be characterized by the physical data, the artifacts, and features in the ground. Archaeological excavations may recover this information. This form of mitigation is called data recovery and includes scientific analyses and the preparation of a technical report. The purpose of conducting excavation as mitigation is to recover, analyze, and document in written form the important information contained within an archaeological site. The report must meet professional standards discussed later in this plan.

As stated above, avoidance of cultural resources during construction is preferred. Whenever practicable, an archaeological site that is determined eligible for listing in the NRHP and/or CRHR should be left in place and preserved from damage. Avoidance and minimization alternatives should be also considered as the first option for sites not evaluated. Avoidance measures may include limiting the size of the undertaking to reduce the effect, modifying the undertaking through redesign, and monitoring ground-disturbance activities to record significant archaeological remains if they are encountered.

### 2.1 ENVIRONMENTALLY SENSITIVE AREAS

Newly discovered and previously known prehistoric and historic archaeological sites located within the Project’s APE shall be designated as ESAs. Construction personnel will be instructed on how to avoid ESAs.

All construction personnel will be trained regarding the recognition of possible buried cultural remains, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. BLM will complete training for all construction personnel. Training will inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials.

### 2.2 PLAN OF ESA ESTABLISHMENT AND DESIGNATION

1. The archaeological consultant shall flag and/or fence cultural resources.
2. The lead Construction Manager and all supervisory personnel shall be informed by the BLM archaeologist and/or its representative of the presence and location of all ESAs within the Project area and the need to maintain integrity of the ESAs.

3. The BLM archaeologist and/or its representative shall convey the archaeological sensitivity of the resource to the construction personnel.
4. Construction personnel shall be informed that ESAs are strictly off-limits to construction, and entrance is not allowed at any time. ESAs shall not be described as archaeological sites. The exact location of cultural resources will be confidential.
5. For prehistoric resources, the BLM archaeologist shall consult with interested Native American tribes regarding the sensitivity of the area and any new discoveries. BLM shall make a reasonable and good faith effort to address concerns. BLM shall consider the role of Native Americans regarding supporting the monitoring of significant Native American resources within and adjacent to Project impact areas.
6. Archaeological monitors shall maintain flagging/staking for ESAs to identify these as areas where no ground-disturbing activities are to take place. Results of this effort shall be presented in the monitoring report for the Project.
7. Archaeological monitors shall immediately report all violations to BLM.

If a resource cannot be avoided, then the resource will be evaluated for eligibility for listing in the NRHP and/or CRHR.

## TRAINING

BLM will provide a background briefing for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA, and procedures to treat unexpected discoveries. An IVSP training document has been prepared and will be provided to construction personnel in support of the on-site training described below. The training document provides prehistoric, historic, and regulatory contexts, the roles of BLM and the archaeological monitors, the responsibilities and authority of the monitors, an outline of discovery protocols, and examples of artifacts. The cultural resources training shall include the following:

1. A summary of the archaeological and cultural sensitivity of the area.
2. The regulatory context and BLM protocols.
3. Project roles and responsibilities for the BLM archaeologist and the archaeological monitors.
4. Authority of archaeological monitors to halt work.
5. Basic artifact recognition.
6. The understanding that if construction personnel observe cultural material or what appears to be a cultural resource, the BLM archaeologist and/or representative shall be contacted immediately. Construction personnel shall have the requisite contact information.
7. The explicit understanding that cultural resources and human remains are not to be disturbed.
8. The procedures to follow if cultural material or human burials are observed:

- Work halts immediately.
- The location is secured and made off-limits to ground-disturbing activities.
- The construction foreman and BLM archaeologist are called immediately.
- Work does not re-commence until authorized by the BLM archaeologist.

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## 3.0 MONITORING PLAN

### 3.1 MONITORING

A consultant will be retained to provide archaeological monitors. An archaeological monitor or monitors will be present during construction. Additionally, monitoring of ground-disturbing activities within 50 feet of a known cultural resource is required. Monitors are to ensure that ESAs are properly (and adequately) marked and protected. A Native American monitor is required at all sensitive prehistoric resource locations. Safety is paramount, and all monitors will undergo safety briefings and abide by all Occupational Safety & Health Administration (OSHA) and Project safety requirements. Monitors have the authority to halt work. BLM will maintain a record of the safety briefings and require that all monitors participate. The following list outlines the qualifications and responsibilities of the archaeological monitors.

1. The qualifications of monitors shall be confirmed by BLM. The consultant shall provide résumés and references. The monitors must be familiar with the types of historic and prehistoric resources within the study area.
2. Monitors shall maintain a daily work log (see Appendix B) that includes the following:
  - a. Date and time of work
  - b. Area of work
  - c. Type of work and equipment present
  - d. Construction activities performed
  - e. Monitoring activities performed (e.g., protection of ESA)
  - f. Cultural resources present
  - g. Name of Native American monitor (if present)
3. Color digital photographs shall be taken, as appropriate, to document monitoring activities. All ESAs, at a minimum, shall be photographically documented prior to, during, and after construction in their vicinity. If previously unknown or inadequately documented cultural resources are encountered during monitoring, BLM and the monitors shall follow the procedures presented in the section titled *Discovery Treatment Plan*.
4. Monitors shall provide daily updates to the Monitoring Supervisor, who shall provide a summary to the BLM archaeologist. Written memo updates shall be provided weekly. The weekly memos shall identify the monitors present, dates worked, and their locations for that week. The memo shall present the results of monitoring for that week. Once monitoring is complete, a monitoring report shall be drafted for review and approval by the BLM archaeologist. The monitoring report shall present the following:
  - a. All monitoring activities
  - b. Location of monitoring

- c. Dates of monitoring
- d. Personnel participating and their qualifications
- e. Resources (ESAs) satisfactorily protected
- f. Damaged resources, including the effects and the significance
- g. Discovered resources and their significance (if any)
- h. Management and treatment measures implemented

The report shall be reviewed and approved by the BLM archaeologist and shall be prepared per *Archaeological Resources Management Reports (ARMR): Recommended Contents and Format* guidelines (OHP 1990).

- 5. Monitors shall maintain the flagging and staking to make sure that all ESAs are avoided and protected. This includes verification that the current conditions of known significant resources do not change as part of this Project. If protected sites exhibit physical changes, then protection measures need to be immediately changed and improved under direction from the BLM archaeologist. Earthmoving within 50 feet of a significant resource may be halted.
- 6. If individual artifacts are exposed during monitoring, they shall be mapped in situ with a submeter accuracy, global positioning system (GPS) unit, collected, analyzed in the consultant's laboratory, cataloged, and curated. A curation agreement shall be established with a curation facility that meets federal standards.
- 7. If a feature (cluster of in situ artifacts, intact hearth, historic foundation, etc.) is exposed during monitoring, construction activities shall be diverted briefly until the Monitoring Supervisor has had the opportunity to assess the find and make appropriate recommendations. Consultant recommendations shall be provided to BLM and in accordance with the *Discovery Treatment Plan* provided later in this document. Avoidance is preferred and, if a resource cannot be avoided, then it first must be evaluated. If the resource is significant, then avoidance must be considered. If a significant resource cannot be avoided, then treatment measures (including possibly data recovery) must be implemented prior to recommencing construction. The details of this process are also discussed in the *Discovery Treatment Plan* provided later in this document. During the field implementation of archaeological studies, earthmoving within 50 feet may be halted.

After mitigation of site impacts are complete, and if additional cultural material is exposed by grading in the same site, additional hand-excavation will not be required unless the additional material represents a new kind of data not recovered during previous data recovery at that site. Such new data would consist of artifact classes and features not recovered during previous mitigation. Features may include hearths, refuse pits, and burials. Even if no additional hand-excavation is required, the newly exposed material shall be mapped and collected.

8. If human remains are encountered, a course of action following the requirements set forth in 43 CFR 10 and the BLM Native American Graves Protection and Repatriation Act (NAGPRA) as presented in the NAGPRA Plan of Action shall be followed. This includes stopping work in the exclusion area for a period of no more than 30 days while the consultation requirements of NAGPRA are completed. Work on the undertaking can proceed outside of the exclusion area. Should these BLM NAGPRA protocols not be followed, a violation of NAGPRA and the Archaeological Resources Protection Act (ARPA) may take place. The ARPA allows the government to assess civil fines and to proceed with criminal prosecution depending on the nature of the violation.

9. Notification Procedures

When a potential discovery not involving human remains is made during construction monitoring, the cultural resources monitor shall temporarily halt or redirect the work at that location and create a temporary exclusion area (Table 1). The monitor shall then notify the on-site Native American monitor (if not present) if the find is prehistoric (or potentially prehistoric) and the Monitoring Supervisor, who shall inspect the find and perform an initial assessment. If the find appears to represent a potentially significant cultural resource, the Monitoring Supervisor shall notify BLM. BLM shall then notify the Construction Manager, who will issue a temporary stop work order for the location of the find. A list of contact information is provided in Appendix C.

If human remains or fragmentary bones that are suspected to be human are encountered during construction activities, work at that location shall be suspended. The archaeological monitor shall notify BLM and the Native American monitor on-site (if not present at the discovery location) immediately. This notification will be the initial step in the consultation procedures under the NAGPRA. The remains shall be left in place and exclusionary fencing shall be placed in a 50-foot radius around the discovery. Decisions regarding additional identification procedures and the continuation or permanent suspension of work at the discovery location shall then be made by BLM.

**Table 1 Discovery Notification Procedures**

Resource Type	Definition (in a 25 m <sup>2</sup> area)	Procedure
Isolated find	Fewer than three artifacts	Monitor to record, photograph, map with GPS
Archaeological site	Three or more artifacts; feature	Monitor to redirect construction, contact Monitoring Supervisor, erect exclusionary flagging/fencing, and record; Monitoring Supervisor to assess

Potentially human remains		Monitor to redirect construction, and contact BLM, Native American monitor (if not present), and Monitoring Supervisor; erect exclusionary flagging/fencing
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## 4.0 DISCOVERY PLAN

### 4.1 PLAN OF TREATMENT OF DISCOVERIES

This Discovery Plan addresses the actions to be taken should discoveries occur during Project implementation. Potential discoveries in the IVSP area are divided into two categories, each requiring distinct management procedures: treatment of previously unknown artifacts, features, site components, or sites; and treatment of human remains discoveries. The procedures to be followed should such discoveries be made during the treatment program or during Project implementation are reviewed below.

If human remains are encountered, the course of action will follow the requirements set forth in 43 CFR 10 and the BLM NAGPRA Protocols. This includes stopping work in the exclusion area while the consultation requirements of NAGPRA are completed. Work on the undertaking can proceed outside of the exclusion area. Should these BLM NAGPRA Protocols not be followed, a violation of the NAGPRA and ARPA may take place. The ARPA allows the government to assess civil fines and to proceed with criminal prosecution depending on the nature of the violation.

Whereas the protocols below apply to all discoveries, specific management and treatment measures may vary according to the resource type discovered, the discovery location within the Project area, and anticipated Project effects. Specific field and laboratory methods are presented in Appendix A.

### **MANAGEMENT OF PREVIOUSLY UNKNOWN SITES, SITE COMPONENTS, OR FEATURES**

Previously unknown artifacts, features, site components, or even sites may be encountered during archaeological monitoring. The spatial distribution of features and their functional types are important aspects of the research design, both in terms of intrasite structure and spatial organization, and in the distribution of features associated with the desert cultural landscape. Some potential for buried remains occurs within depositional environments present within the APE.

Recovery and documentation of cultural materials will, at minimum, include mapping the discovery location and may also include one or more of the following: photographs; illustrations of artifacts, features, or soil profiles; surface artifact collection; and test or data recovery excavations. The procedures outlined below will be adhered to should there be archaeological discoveries during construction monitoring for the Project. A discussion of the disposition and

curation of recovered artifacts is presented later in the section titled *Data Management and Curation*.

Guidelines for the treatment of new discoveries within the Project area are as follows:

- The archaeological monitor shall have the authority to halt work in discovery vicinities and redirect heavy equipment away from the discovery site.
- All ground-disturbing activities that would adversely impact a newly discovered cultural resource shall be halted. The horizontal and vertical limits of the resource within the impact area shall be determined. The resource shall be protected by physical barriers and the presence of monitors to ensure that further disturbance to the resource is avoided and to minimize impacts.
- BLM shall apply the criteria for listing in the NRHP:
  - (A) It is associated with events that have made a significant contribution to the broad patterns of history and cultural heritage;
  - (B) It is associated with the lives of persons important in our past;
  - (C) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; and/or
  - (D) It has yielded, or may be likely to yield, information important in prehistory or history.

Properties found eligible for the NRHP are assumed to be eligible for the CRHR.

- If the cultural resource is determined by BLM to be a historic property (eligible for the NRHP), consultation shall take place to determine the appropriate treatment measures.
- BLM shall consult with Native American groups or other interested parties regarding the treatment of the find.
- As needed, a data recovery plan shall be developed by the consultant under direction and in coordination with BLM and to recover the significant values contained by newly discovered resources. Recovered data shall be processed, analyzed, and reported concurrent with other sites addressed during the treatment program. Refer to the specific field and laboratory methods in Appendix A.
- If individual non-diagnostic artifacts are exposed during monitoring or construction, they shall be mapped in situ. If diagnostic artifacts are exposed, they shall be mapped using a sub-meter accuracy GPS unit, collected, analyzed in the consultant laboratory, catalogued, and curated.
- If a feature (e.g., cluster of in situ artifacts, intact hearth, or foundation) is exposed during monitoring, construction activities shall be diverted until the find can be assessed and appropriate recommendations made. If excavation is required, it shall be accomplished expediently. Features shall be exposed and recovered using standard excavation techniques,

with care taken to maintain the provenance of the feature as a distinct unit. The feature shall be photographed and mapped in place prior to recovery. Samples shall be recovered for special analyses (e.g., radiocarbon, macrobotanical, palynological, or faunal) as appropriate to the character of the feature. Artifacts collected shall be analyzed in the consultant's laboratory, cataloged, and temporarily curated.

- A determination shall be made as to whether a new discovery is part of an existing site or a previously unknown cultural resource. Based on that determination, either new Department of Parks and Recreation (DPR) forms will be created or the existing DPR forms shall be updated to include the discovery. The potential significance of newly discovered sites or site components shall be evaluated relative to the research design.
- If a new site or significant component of a previously recorded site is discovered, construction activities will be halted in the area until an assessment of the find can be made. If it is determined that the site has the potential to yield important data that can address research questions, a sample of the site area shall be hand-excavated using the standard archaeological procedures described in Appendix A. BLM shall be informed by the consultant as to the estimated time necessary for an NRHP/CRHR eligibility determination. The assessment shall include mapping the locations and elevations of new discoveries. To the extent possible, boundary definition, assessment of content and integrity, and assessment of eligibility shall be accomplished with shovel test pit (STP) excavations. At minimum, the evaluation shall include recording, excavating, and reporting major features or artifact concentrations uncovered, and recovery/curation of a sample of uncovered artifacts where practicable.
- Construction activities in the discovery area shall not resume until the site evaluation is completed. The consultant shall prepare a brief report of the findings and eligibility evaluation, and propose avoidance measures and provisions to minimize impacts specific to that discovery. This shall be submitted to BLM for review and concurrence. If further disturbance cannot be minimized, then the cultural resources contractor shall provide justification and recommendations for data recovery to BLM. If BLM determines that disturbance is justified, then recommendations for data recovery shall be reviewed by BLM for adequacy and to evaluate the cost of treatment versus the cost of Project redesign. Interested Native American community members shall be consulted if the resource contains a Native American context. Only after BLM review and approval of a site-specific data recovery plan shall such excavation be performed. Data recovery shall collect a representative sample of the deposits that would be destroyed.
- The discovery of human remains during Project implementation shall require special procedures, as discussed below.
- If additional cultural material is exposed by construction, after mitigation of site impacts has been performed per the Discovery Treatment Plan, additional hand-excavation will not be required unless the material represents a new type of data. Such new cultural material would consist of artifact classes and features not recovered in previous excavations. However, even if no additional excavation is required, the newly exposed material shall be mapped and collected.
- Discoveries and their treatment relative to the research shall be reported in the final monitoring report for the Project. A separate report of findings and interpretation relative to a research design shall be prepared if data recovery excavations are employed for mitigative site treatment.

## MANAGEMENT AND TREATMENT OF HUMAN REMAINS

Human remains may be discovered in situ during the field excavation program, which includes the test unit excavations. Additionally, human remains may be discovered during the laboratory processing and analysis phases of the treatment program. Archaeological monitoring both within and outside site areas is also planned, during which isolated or disarticulated human remains may be uncovered. One of the objectives of archaeological monitoring is to identify such remains while they are still in place so they and their context can be managed in a manner that is sensitive to the Native American community or other ancestors and to address existing regulations.

If human remains are encountered, the course of action will follow the requirements set forth in 43 CFR 10 and the BLM NAGPRA Protocols as presented in the NAGPRA Plan of Action. This includes stopping work in the exclusion area for a period of no more than 30 days while the consultation requirements of the NAGPRA are completed. Work on the undertaking can proceed outside of an exclusion area defined by BLM. Should these BLM NAGPRA Protocols not be followed, a violation of the NAGPRA and ARPA may take place. The ARPA allows the government to assess civil fines and to proceed with criminal prosecution depending on the nature of the violation.

While it is hoped that human remains will not be encountered during the treatment program, the possibility exists that such a discovery can occur, and procedures are included herein to address such an event. When skeletal remains that may be human are encountered, the following steps will be taken:

- For Project construction activities (as described in the Monitoring Section), if definite or suspected human remains are encountered, the archaeological monitor shall halt work in the discovery vicinity and redirect heavy equipment away from the discovery site to avoid ground-disturbing activities that could adversely impact the remains. The monitor shall also immediately contact/notify the on-site Native American monitor, the consultant Monitoring Supervisor, and BLM. BLM shall then direct the procedures for identification and/or verification of the remains as human. The horizontal and vertical extent of occurrence of the remains within the impact area shall be determined. The remains shall be protected by physical barriers and the presence of monitors to ensure that further disturbance to the remains is avoided. Subsequent to verification of the remains, as previously indicated, the course of action shall follow the requirements set forth in 43 CFR 10 and the BLM NAGPRA Protocols.
- For archaeological investigations, activities in the discovery area shall cease and the field supervising archaeologist shall notify the on-site Native American monitor and the Principal Investigator, who shall notify BLM. As with a discovery during construction, BLM shall then

direct the procedures for the identification and/or verification of the remains as human. Subsequent to verification of the remains, as previously indicated, the course of action shall follow the requirements set forth in 43 CFR 10 and the BLM NAGPRA Protocols.

- Human remains shall be treated with respect and dignity, with care taken to limit disturbance and maintain the association of the remains with any accompanying funerary items and their physical setting. Archaeological investigations or Project development work shall not resume in the discovery area until the appropriate recovery and management actions have been completed.
- The specific location of the discovery shall be withheld from public disclosure, as will the location of any reburial site.
- No excavation of human remains shall be put on public display in any manner, nor photographed, except for the purpose of scientific documentation. No photographs of human remains shall be distributed to the public or published.

For laboratory situations, where small bone or fragments may be identified as sensitive, similar notification and management procedures to field discovery will be followed, and strict provenance controls will be maintained. As with the field, the initial step is expert identification which shall proceed as directed by the BLM. Subsequent to verification of the remains, the course of action will follow the requirements set forth in 43 CFR 10 and the BLM NAGPRA Protocols, including consultation with tribes and preparation of a written plan for management of the remains.

## 5.0 DATA MANAGEMENT AND CURATION

### 5.1 TECHNICAL REPORT PREPARATION AND DISSEMINATION

Reports regarding training, monitoring, consulting, evaluating, and data recovery (if necessary), will be responsive to contemporary professional standards. This will include the *Secretary of Interior's Standards for Archaeological Documentation* (NPS 1983).

A comprehensive technical report may be required that will present the results of monitoring, evaluation, and treatment programs completed in relation to the Imperial Valley Solar Project. The production and dissemination of the technical report is the final step in treatment. The consultant is responsible for technical report preparation, with BLM oversight and final document approval. The technical report and ancillary studies will also be responsive to contemporary professional standards and consistent with *ARMR* (OHP 1990). Precise locational data may be provided in a separate appendix if it appears that its release could jeopardize archaeological sites.

The draft report(s) will contain cultural background; the results of Native American consultation; a description of the physical environment; research design, methods, and results sections; and a discussion of meaning (interpretation). Results of laboratory and specialized analyses will be given along with a discussion of spatial and temporal distributions, as appropriate to the individual report. At a minimum, final technical report(s) resulting from actions pursuant to this treatment plan will be provided by BLM to the South Coastal Information Center.

### 5.2 CURATION IN PERPETUITY

Following completion of cataloging and analytical procedures, Project collections will be prepared for permanent curation according to Smithsonian Institution guidelines and the requirements of the permanent curatorial facility. Materials to be curated include archaeological specimens and samples, site catalogs, field notes, field and analysis forms, feature and burial records, maps, plans, profile drawings, photo logs, photographic negatives, consultants' reports or special studies, and two copies of the final technical report. These materials will be curated at a facility that meets federal standards as promulgated at 36 CFR Part 79, *Curation of Federally Owned and Administered Archaeological Collections*.

## REFERENCES

### National Park Service (NPS)

1983 *Secretary of Interior's Standards for Archeological Documentation*. Washington, DC.

### Office of Historic Preservation (OHP)

1990 *Archaeological Resources Management Report (ARMR): Recommended Contents and Format*. California Office of historic Preservation, Sacramento, CA.

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APPENDIX A  
SPECIFIC FIELD AND ANALYTICAL METHODS

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## ATTACHMENT A

### SPECIFIC FIELD AND ANALYTICAL METHODS

Standard archaeological field, laboratory, and analysis methods that are consistent with current scientific and regional procedures will be used for the Imperial Valley Solar Project (IVSP or Project). This appendix addresses newly discovered sites that cannot be avoided by Project construction. Upon unanticipated discovery of intact cultural deposits, including features, these resources will be evaluated for listing in the National Register of Historic Places (NRHP) and/or the California Register of Historic Resources (CRHR).

Strategies will include controlled excavations, which consist primarily of Shovel Test Pits (STPs) that measure 0.5 by 1 meter (m), Test Excavation Units (TEUs) that measure 1 by 1 m, and/or larger block exposures that are hand-excavated with strict provenance controls using shovels, trowels, picks, and other tools. Supervised mechanical excavations may also be used, where appropriate, as well as remote sensing surveys.

Archaeological resources are normally determined eligible under NRHP Criterion D or CRHR Criterion 4, potential for important information. The resource must clearly demonstrate the potential and must exhibit the requisite physical integrity. The presence of diagnostic (datable) material and/or artifacts allowing the opportunity to date the site is imperative. Resources in disturbed contexts with no opportunity to be dated are often ineligible for the NRHP. If a resource is eligible and cannot be avoided by construction, the Bureau of Land Management (BLM) may decide to conduct data recovery and excavate a representative sample of the site employing the excavation strategies below.

#### **FIELD METHODS**

##### **SURFACE SCRAPES**

Surface scrapes are employed in areas of dense vegetation and involve scraping the ground with a shovel in large units to expose the surface for examination.

##### **SHOVEL TEST PITS**

STPs are preliminary tests for the presence of subsurface cultural deposits. It is expected that they will be used to delineate the boundaries of previously unknown sites, site components, or large diffuse features, should they be discovered during archaeological fieldwork or monitoring. STPs normally measure approximately 35 centimeters (cm) in diameter and are excavated in incremental 10-cm levels. The number and distribution of STPs depend on the size and geomorphic setting of each site. Each STP is excavated to bedrock or to soil strata that are clearly not of a culturally relevant age, with the ground surface serving as reference for depth

measurements. Excavated soil is reduced by dry-screening through ¼-inch mesh hardware cloth, and recovered artifacts are collected and bagged by level, with reference numbers assigned and typical labeling information provided. Stockpiled dirt is returned to the STP upon completion; shovel test forms are completed for each unit.

## TEST EXCAVATION UNITS

Manually excavated TEUs afford larger subsurface exposures than STPs and are used to recover representative samples of subsurface artifacts with controlled depth information. In general, TEUs measure 0.5 square meter (0.5 by 1 m) to 4 square meters (2 by 2 m); however, dimensions may vary according to circumstances, and adjacent units may be excavated in various configurations to develop block exposures. For example, site depth is a determinant for defining unit size. Unit depths greater than 1.5 m (5 feet) require the opening of an adjacent unit for health and safety issues, as well as for facility of excavation and recording. Also, additional exploration and exposure of a feature that extends beyond the boundaries of a TEU may be necessary. Excavation proceeds by 10-cm arbitrary contour levels unless natural or cultural strata are present; then, levels are subdivided to maintain these distinctions. Contour levels are maintained by measuring depth from the existing surface. An excavation level record is completed for each level. As appropriate, other records are completed, including plan views, profiles of test units, and descriptions of features. In addition, test units are selectively photographed during excavation to show artifact and/or stratigraphic associations, profiles, features, or other data.

Test units will be numbered by a sequential designation. The highest corner of each test pit is designated the unit's datum for elevation control. This corner will be marked with a pin flag labeled with the test unit's number. Depths of units are determined by empirical site stratigraphy. In alluvial or aeolian deposits, units can range up to several meters below the surface of the site. Whenever possible, units will be excavated to bedrock or to sediments that are clearly not of a culturally relevant age.

Hand-excavation of test units will normally be accomplished using shovels, trowels, breaker bars, and picks, depending on the composition of the soil and the nature of the cultural deposits. In feature contexts, trowels, brushes, and other small implements may be most appropriate. Special methods are used in the excavation of features, including sample collections suitable for special study. Charcoal (for radiocarbon assay) is collected when present. Depending on excavation context and research design issues, other samples that may be collected include bulk sediment for humate analysis and/or chemical analysis, pollen and/or phytolith, and flotation. Excavated soils are typically dry-screened through ¼-inch mesh to reduce sediment volume and bagged and tagged as previously described.

## AUGER EXCAVATION

Auger excavations are used to define soil stratigraphy, to locate bedrock, or to test for the presence of cultural remains at greater depth, including potentially buried deposits. With extension handles, this procedure can accurately locate and trace soil strata at depths of several meters. Augers can be placed in the bottom of STPs or other excavation units to further test for depth of deposit when additional excavation is otherwise impossible. However, the small volume of most auger borings limits the usefulness of this procedure for mapping the absence of subsurface cultural deposits with certainty. Auger excavations may or may not proceed using arbitrary levels (e.g., 10 cm or 20 cm), depending on the circumstances. Augered soils are typically screened through ⅛-inch mesh to recover cultural remains. On each site, auger tests are sequentially numbered, and recovered materials are bagged, labeled, transported, and processed in the same manner as other excavated materials. Reference log numbers are assigned to each provenance unit, and an auger form is completed. Auger test locations are plotted on the site plan views, and auger holes are covered upon completion with the dirt available from the initial screening reduction.

## TRENCHING

Where trenching is conducted, an archaeologist and/or geoarchaeologist will direct backhoe operation. The duties of this person include selecting trench locations and their dimensions, monitoring the backhoe while in operation, and examining profiles. Depths of trenches are determined by the site context. For safety, trenches deeper than 1.5 m (5 feet) should be double width or shored. This is an Occupational Safety & Health Administration (OSHA) requirement. Trench walls are photographed and profiled, and stratigraphic units are described. To facilitate accurate sketching, elevation-control stakes are placed at 20-m intervals along the excavated portions of the trench. Trench profiles will be cleaned and examined at least every 5 m. The depth of stratigraphic boundaries is measured from the surface, with strata boundaries extrapolated between mapping points. Standard sedimentary and soil variables are recorded for each stratum. Recorded variables may include (1) description of contacts; (2) soil color; (3) textures; (4) boulder and gravel content; (5) large clast angularity (gravel size and larger); (6) large clast lithology; (7) soil structure, consistency, and plasticity; (8) root content and form; (9) sedimentary structure; (10) disturbance; and (11) organic content. Standard data on soils and sediments are recorded on the Soil Worksheet. As warranted, diagnostic artifacts and special samples may be collected from trench profiles. These collections will be point provenanced and assigned individual numbers.

Back dirt from the trenches will be sample screened at no less than 5-m intervals through ⅛-inch mesh. All features encountered will be exposed by hand. Features will be recorded and mapped on feature forms and photographically documented.

Each trench is marked with a wooden stake labeled with the trench designation. A master list of trenches with their locations, dimensions, and general observations is maintained, and trench locations are included on the site map. Backfilling of trenches is done by backhoe after manual excavations on a site are complete. The wooden stakes marking trench locations will be left in place for mapping.

## FEATURE EXCAVATION

Features will be exposed in plain view. If necessary, additional excavation units will be opened as a block. All feature components will be mapped and photographed. If appropriate, the feature will be bisected and profiled, and soil samples will be collected to allow the studies discussed below.

## GEOMORPHOLOGY

The use of geomorphology in archaeological excavations has increased substantially over the last decade. A trained geomorphologist/geoarchaeologist will determine and discuss landform context and site formation processes, including the issue of disturbance, and will profile select trenches and excavation units. The geomorphologist will also help determine where trenches should be placed to obtain the best cross-section of the site stratigraphy.

## REMOTE SENSING

There are several types of remote sensing techniques that are useful to locate buried features and other anomalies on archaeological sites. These techniques are noninvasive and, when used in combination with hand-excavation, can greatly increase the efficiency of the latter by indicating areas worthy of investigation. Such techniques may be employed in circumstances where they can provide information not otherwise obtainable.

**Ground Penetrating Radar (GPR).** GPR is a geophysical method that has been developed over the past 30 years for shallow, high-resolution, subsurface investigations of the ground. GPR uses high-frequency pulsed electromagnetic waves to acquire subsurface information. Energy is propagated downward into the ground and is reflected back to the surface from boundaries where there are electrical property contrasts. GPR is a method that is commonly used for environmental, engineering, archeological, and other shallow investigations.).

**Resistivity Survey.** Another method, soil-resistivity survey, uses an electrical current introduced into the soil to locate anomalies. The ease or difficulty with which this current flows within the soil is then measured, and resistant areas are mapped. Results are useful when the resistivity contrasts between the archaeological record and the surrounding soil matrix.

**Magnetic-Field Gradient Survey.** Magnetic-field gradient survey consists of mapping deviations from the uniformity of Earth's magnetic field.. This technique is based on the magnetic field gradient being consistently zero, with deviations from this uniformity indicating archaeological features. Magnetic-field gradient surveys are particularly useful in detecting remnant magnetization that originates from heating iron oxides found in most soils in features such as hearths, fire pits, and ceramic concentrations.

## MAPPING METHODS

**Point Provenance Method.** The point provenance method is employed to map the locations of diagnostic artifacts, tools, and other items or significant features prior to collection or excavation, or to collect the surface of low-density sites. The Global Positioning System (GPS) units with sub-meter accuracy are used for point provenance mapping of monitoring finds, surface scatters of artifacts, and collecting isolated diagnostic cultural materials. Monitors and field mapping personnel will use hand-held GPS units to map finds and to collect surface materials. Materials collected will be assigned sequential reference numbers that are logged on GPS recording forms for the location of each item or feature documented. The reference number is used to prepare a site or item location map and in the presentation of tabled data and artifact illustrations provided in the technical report.

**Electronic Distance Measurer Method.** During testing and data-recovery program, where provenance accuracy is critical for meaningful interpretation of cultural resources, the electronic distance measurer (EDM) method is typically used. The EDM method provides precise locational data in three dimensions. Because each mapping shot records the vertical azimuth, distance, and bearing, site topography can also be easily documented. To make maximum use of the precision afforded by this mapping technique, data are linked to AutoCAD and geographic information system (GIS) software data and downloaded or entered into an electronic mapping program for output. When the mapping data are plotted, the result is a precise scaled map.

An electronic total station is used for the EDM method, and a single primary mapping station is located in a central area of each property. Sub-data are established, as needed, especially on large sites or those with diverse topography. Stations are established with a well-embedded 9-inch-long nail, and demarked with black-and-pink striped surveyor's flagging. Station labeling includes the station number, site number (permanent designation if available, field number if not), research organization, and date. At large properties, secondary mapping data can be established, keyed to the primary datum, and properly labeled to facilitate recordation of cultural, topographic, and other data.

## PHOTOGRAPHS AND ILLUSTRATIONS

Photographic documentation will include color digital photographs taken throughout the monitoring program and during all phases of individual site treatment activities such as testing and/or data recovery. Photographs taken during monitoring will be used to document the activities monitored and the initial recordation of any discoveries or finds made. During testing and/or data recovery activities, photographs will include site overviews to show a site's physiographic and environmental setting, hand and mechanical excavations in action, and features and unit wall profiles. Photographs will be recorded on standard photographic logs identifying the frame, day, month, year, time, subject, and direction of view. Illustrative photographs will be included in the draft technical report.

Sketches or illustrations of unique features and artifacts are also beneficial in depicting details that are sometimes not evident in photographs. These techniques will be used, as determined necessary, and also included in the draft technical report.

## CATALOGING AND ANALYTICAL METHODS

Collected artifacts will be inventoried and organized during and following fieldwork and prior to sorting and detailed attribute recording. The Reference Number Log (bucket/bag log) that is completed in the field is submitted to the laboratory with the bagged and labeled residues. The Reference Number Log is the primary inventory document and serves as the list against which artifacts and forms are crosschecked when transferred to the laboratory. Checking assures that (1) collections and data forms are present; (2) the provenance designations (e.g., site, test unit, depth) on each collection bag match those on the data forms and in the Reference Number Log; and (3) other required data sheets (e.g., feature records or special sample forms) are present, accurate, and complete. Data sheets with incomplete or unclear information and those that contradict other data sheets for the same property are returned to the appropriate field personnel (e.g., crew chief, field monitor) for correction.

### CLEANING

Prior to cataloging and analysis tasks, most artifacts and specimens will be cleaned and stabilized, either at the wet-screening station or in the laboratory. Specimens that will *not* be cleaned include (1) wood or fiber; (2) fragile/friable bone, antler, or shell; (3) selected groundstone (for possible pollen wash or immunological analysis); (4) selected lithic tools (for blood residue analysis); and (5) possible baked clay or ceramic items.

For other artifacts, adhering dirt will be removed by washing or dry brushing. Flaked stone, groundstone, and shell are typically cleaned using water. Depending on its condition, bone may be either dry brushed or quickly immersed in water, gently brushed, and then quickly rinsed. To

prevent accidental contamination between provenances, artifacts from a single provenance will be cleaned and/or stabilized at the same time, and washing should proceed one unit at a time. Once dry, individual artifacts from each provenance will be placed in clean polyethylene bags along with identification tags produced on archivally stable cardstock. Radiocarbon samples will be placed in either aluminum foil pouches or in glass vials, which will then be placed in clean polyethylene bags. Flotation, pollen, sediment, and other bulk samples will be left in double polyethylene bags until they are processed.

## SORTING AND CATALOGING

Sorting and cataloging methods will follow the requirements of the curation standards for a facility that will meet minimum federal requirements as published in 36 Code of Federal Regulations (CFR) Part 79. Specific curation requirements at the facility selected to curate the Project materials will also be ascertained and followed.

Recovered data are separated hierarchically into material class, artifact type, material, quantity, and weight. Material class separates artifacts and other data into such major categories as stone, ceramic, bone, shell, glass, metal, and others. The second ordering variable (artifact type) places the artifact into a category such as debitage, biface, mano, or awl. Material is sorted by toolstone (e.g., chalcedony, obsidian, volcanic, quartzite, or granite), bone, shell, etc.

This information is recorded on the master catalog form with the following additional data: count, weight, locus, unit coordinates, depth/level, unit type, unit designation, and curation box number. Stone, bone, and shell artifacts are counted; unmodified shell, bone, and charcoal are not. Special samples and ecological data (ecofacts) are recorded on the same catalog form, with the same information required for artifacts. Where appropriate, feature number, sampling stratum designation, soil stratum (stratigraphic) designation, and screening mesh size are also included for each catalog entry. Attributes for cores, debitage, flaked stone tools, groundstone, bifaces or projectile points, and prehistoric ceramics are recorded on the corresponding sub- or detail catalogs.

After the information has been recorded, an artifact is given a three-part catalog number, with each part separated by a dash. The first part of the catalog number is the site number, the second part is the year excavated, and the third part is assigned consecutively in the order of entry. After assigning catalog numbers, the artifacts will be placed in clean polyethylene bags with the catalog number and provenance written with archival-quality black ink markers. Identification tags will be generated on adhesive archival-quality labels and applied to the interior of the bags. The tags will include, at a minimum, catalog number, artifact type, and provenance information. Each tag will show the catalog number along with other pertinent

information, such as site number and selected provenance information. Bagged artifacts are stored in 6-inch-square boxes, which are incorporated into the temporary boxing system. The catalog will be entered into the computerized data management system for ease in sorting and manipulating data within and between sites.

## TEMPORARY CURATION METHODS

Processed artifacts will be physically organized by artifact type and grouped using archival bags and boxes. The boxes will be temporarily stored at the AECOM processing facility until transfer to the designated curation facility. The boxing system is set up by site, class, and project number. After cataloging, the artifacts are placed in appropriately sized boxes. These boxes will be labeled with the box number and the item type (e.g., debitage, groundstone, bone, soil samples). Smaller archival-quality boxes or plastic film canisters may be used for small or unusual artifacts that need further protection. The boxed artifacts are then placed in a 12- by 15- by 10-inch archival banker's box. The boxes are recorded on an Inventory Spread Sheet.

For a discussion of long-term curation and artifact disposition, refer to the chapter *Data Management and Curation*.

## ARTIFACT AND ECOFACT ANALYSES METHODS

Following initial processing and interim curation, artifact and sample analyses will proceed. The recovered chipped and groundstone assemblages, bone and shell artifacts, shell and faunal assemblages, and other items will be subject to a variety of morphological, functional, technological, and typological analyses as appropriate to the data class and research goals. Brief overviews of standard analysis methods are provided in the following sections.

**Chipped Stone.** The analysis of chipped stone items is directed toward developing classes (and types) of artifacts that are based on morphological, functional, and technological attributes.

**Bifaces.** Finished bifacial tools include such formal items as points, knives, and drills. The trajectory of biface reduction yields progressively smaller flakes and an objective piece that becomes thinner and takes on a planned form. The objective piece can include the original cobble/core or any detached flake modified using the bifacial strategy. At any point in the production sequence, an incomplete or broken biface can be used as a tool. Bifaces are classified according to the stage of manufacture represented. Biface reduction/production is recognized as a continuum, and the stages reflect arbitrary divisions within this continuum. Biface reduction can be performed on flakes, cobbles, or split cobbles, and can result in cores, tools, and rejected items.

The following data will be recorded for analyzed bifaces: manufacturing stage; lithic material; color, condition, and portion present; overall shape; base shape; transverse cross-section; longitudinal cross-section; and maximum dimensions (length, width, and thickness). The stages of biface manufacture include the following:

- *Stage 1: Edging.* Deep and wide cortical removals originate from natural lateral surfaces. Twenty percent or more of the cortex is retained. The cross-section is irregular or blocky. The width-to-thickness ratio is greater than 3:1.
- *Stage 2: Primary Thinning.* Primary thinning includes second-row and some third-row flaking, loss of natural surface platform angles, prepared platforms, straightened edges, and the most prominent masses and ridges removed. Minimal cortex is retained by the end of Stage 2. The biface begins to form an ovate shape, but the cross-section is rectangular, trapezoidal, or very thick lenticular. The width-to-thickness ratio is less than 3:1.
- *Stage 3: Secondary Thinning.* Overlapping flake scars form opposing lateral margins, no cortex remains, and the biface assumes the desired shape. The cross-section is becoming more lenticular, and the width-to-thickness ratio is about 4:1. Often, change to soft hammer percussion techniques takes place during this stage.
- *Stage 4: Shaping to Preform Tool.* Shaping results in regular flake removals and uniform lateral edges. The cross-section is very lenticular, and optimal width-to-thickness ratios are reached (between 4:1 and 5:1). Optionally, a change to pressure flaking may be made for tool shaping.
- *Stage 5: Finishing.* The preform is finished by notching or fluting, basal grinding, or minor retouch and shaping, if necessary, accomplished through pressure flaking. Stage 5 bifaces can be further subdivided into morphological types.
- *Stage 6: Tool Maintenance and Resharpener.* Continued use of the tool results in dulled edges. Resharpener by pressure flaking reduces the size of the tool and produces a characteristic S-shaped edge cross-section.

**Projectile Points.** Projectile points are finished bifaces and are a morphologic variation of this chipped stone category. Points exhibit a wide range of styles that are chronologically and culturally diagnostic and are, therefore, treated in greater detail. Typological analysis of projectile points provides diagnostic artifact characteristics to the items and increases their importance for chronological, settlement, subsistence, and technological research.

Projectile points are well-shaped (although not always symmetrical) thin bifaces with uniform cross-sections, regular and non-sinuous edges, little to no cortex, and minute edge alteration and retouch. They often have a deliberately prepared haft element oriented near the center of one end. From the distal to proximal ends, attributes of points include the tip, blade, and stem, but reflect considerable morphological variability in tip form, blade edges,

shoulder/barb configurations, notch location and orientation, stem shape, tang morphology, and base configuration.

The attribute stage of analysis recognizes three subclasses: “dart” points/shafted knives, “arrow” points, and indeterminate points. Points are further classified into named types (where possible). The attributes recorded for projectile points include lithic material, condition and portion present, blade edge form, blade shape, base shape, shoulder form, stem form, presence of serration, presence of basal notching, presence of side notching, cross-section, actual maximum dimensions (length, width, and thickness), length at longitudinal axis, actual width, position of maximum width, maximum blade width, basal width, maximum stem width, position of maximum stem width, shoulder height, proximal shoulder angle, distal shoulder angle, notch opening, side notch width, basal notch width, side notch depth, and basal notch depth.

**Cores.** This class of artifacts refers to bulky objective pieces used in the preparation of chipped stone tools. Most of these items are pieces representing a wide range of lithic reduction strategies, with the main goal oriented toward testing the quality of material or producing large serviceable flakes suitable for use or for modification into formal tools. Cores can be minimally described by core type, maximum dimensions (length, width, and thickness), lithic material, total observable flake removals, and percentage of cortex.

Cores can be separated into the following categories:

- Test blocks largely reflect the morphology of the original cobble and have a high percentage of cortex. They are characterized by a minimum amount of flaking (usually fewer than five flake scars), which was used to assess the texture and knapping quality of the stone and to determine whether vugs or impurities are present. Test blocks tend to represent rejected materials (i.e., those excluded from tool production trajectories).
- Split cobble/pebbles are the result of splitting cobbles or pebbles into half sections for further reduction. A minimum number of flake scars may be present. The specimens are not shaped and have thick, irregular cross-sections approaching plano-convex. Cortex covers more than 50% of the dorsal surface. Some secondary flaking may occur around the perimeter of the split edge, but the modification has not substantially changed the morphology of the split sections. The edges may or may not be sinuous.
- Biface cores are virtually indistinguishable from Stage 1 and 2 bifaces, described previously.

- Unidirectional cores primarily have a single striking platform from which a series of flakes has been detached. The flake removal can reflect direct percussion or bipolar technique, but the vast majority of flakes should originate from the single platform.
- Bipolar cores resemble single platform cores, but differ in the existence of a second platform on the opposite end of the core. The orientation of flake removal is from both ends of the core along a single axis.
- Bidirectional cores are similar to bipolar cores, but differ in the location of the second striking platform. In bidirectional cores, the platforms are not in opposable locations.
- Multidirectional (also labeled amorphous or unpatterned cores) have multiple platforms and flake scar orientation that may either coincide with the ridges on the original cobble or lens geometry or utilize appropriate edge angles from previous flake scar removals. The flake scar removal patterning may appear haphazard and random.

**Unifaces.** Unifaces are shaped tools or incidentally shaped flakes or blades that have been retouched or display continuous modification along one or more edges of one face. Flakes with modification along different edges on alternate faces are also regarded as unifaces. Edge modification can occur on the dorsal or ventral surfaces. During analysis, unifaces will be typed according to existing morphological categories (e.g., keeled scraper, beaked scraper, or concave scraper). In addition, the following observations may be recorded for each specimen: material, shape, cross-section, longitudinal cross-section, condition, location of worked edge(s), maximum dimensions (length, width, and thickness), and edge angle. Unifaces can be subdivided into the following subclasses:

- Formally shaped unifaces are tools with extensive retouching that has substantially modified the morphology of the tool. The retouching consists of a continuous series of flake scars knapped from the edge and extend from at least one-quarter to the entire face of the tool. The tool morphology may or may not be symmetrical, but the modification is relatively extensive and clearly patterned.
- Informally shaped unifaces are tools with incidental edge modification or retouching not substantially modifying the outline morphology of the flake. These items are regarded as expedient tools selected for their natural morphology or edge characteristics and are believed to have been used for a limited number of tasks. The shape of the original flake is largely evident. Edge modification is restricted to a series of five or more continuous flake scars along the edge. Discontinuous nicks randomly occurring along the edge are not regarded as modified flake tools.

**Debitage.** This category of artifacts refers to unmodified, discarded knapping residues resulting from the production and maintenance of chipped stone tools. Represented are a wide range of remains, including complete and broken flakes, angular waste, and heat spalls and potlids from errors in heat treatment. The attributes recorded for debitage include lithic material, manufacturing stage, completeness, presence and percentage of cortex, evidence

of heat treatment, and size. Debitage generally can be defined within the following six categories:

- Core flakes have definable dorsal/ventral surfaces and predominantly unfaceted platforms with steep platform/dorsal edge angles. The dorsal surface flake scar patterns may have unidirectional or multidirectional orientations. Flake cross-sections may be thick, angular, and irregular. Cortex commonly occurs on platforms and/or dorsal faces of these specimens.
- Biface flakes have definable dorsal/ventral surfaces and predominantly faceted platforms, acute platform/dorsal edge angles, and dorsal surface flake scar patterns with mostly multidirectional orientations. Flake cross-sections tend to be thin and concave/convex. Cortex does not occur on platforms and is rarely present on dorsal faces of these specimens. Biface reduction may have resulted in cores or tools.
- Unidentified flakes are flakes or flake fragments that possess insufficient characteristics to be classified as either core or biface flakes. They have definable dorsal and ventral orientations, but platforms are generally absent. This subclass is a general “catch-all” category for non-diagnostic flakes.
- Blades are a special form of long, relatively thin flakes characterized by unidirectional flake scar patterns on the dorsal face and a length-to-width ratio in excess of 2:1.
- Angular waste consists of irregular pieces of knapping debris that do not possess sufficient morphological attributes to permit classification into a specific flake category. Most are angular and blocky without discernible platforms or dorsal/ventral surface orientations.
- Heat spalls and potlid flakes are derived from thermal damage and are morphologically distinct from knapping debitage. Heat spalls are often characterized by crazed exterior surfaces and sometimes thermally discolored lithic materials. Typically, the dorsal surface of heat spalled debris displays cortex or compression rings from previous flake removals. Potlids are plano-convex spalls, where the planar surface is the dorsal side and the convex surface is the ventral. Potlids and heat spalls are formed from differential expansion/contraction of stone materials under extreme thermal conditions; they characteristically lack the compression rings of force. This type of debris is usually derived from failed attempts at heat treatment or accidental exposure to fire.

Because debitage is generally the most frequent artifact class on prehistoric sites, and because minimal additional key conclusions can be obtained using size data on numerous individual specimens, size sorting of debitage can be accomplished. Debitage analysis is also useful for determining whether heat treatment was a phase in tool production. Characteristic heat treatment attributes or damage such as differential luster and crazed surfaces will be recorded during debitage analysis.

**Groundstone.** Groundstone is defined as lithic material whose shape is modified by repeated friction of stone against stone, as opposed to chipping. Groundstone is recorded using simple

morphological and technological attributes based on size and shape. For groundstone specimens, type, lithic material, number of ground surfaces, and maximum measurements (length, width, thickness, and weight) are recorded. In addition, evidence of formal shaping, rejuvenation, secondary use, and the presence and distribution of peck marks, polish, and striations can be recorded.

Common groundstone artifacts include the following:

- Milling stones or metates are large, tabular pieces of stone that exhibit flat to concave ground surfaces on one or both faces. They served as the surface against which materials were ground. They are separated into slab, block, and amorphous forms based on thickness and cross-section. Those that have rectangular cross-sections and are 6 cm or less in thickness are termed slab milling stones. Those with rectangular cross-sections but are greater than 6 cm in thickness are termed block metates. Milling stones with irregular, long cross-sections, without consideration of their thickness measurements, are termed amorphous. Surfaces may be classified as Type A (planar) or Type B (concave).
- Handstones or manos are handheld grinding stones used to mill food grains or other items against a metate. Typically, they are slabs or cobbles of a size to fit in one or two hands and exhibit a flattened, ground surface on one or more of their faces. Type 1 manos include amorphous to subrectangular handstones with no indication of intentional shaping. Type 2 manos are those that have been shaped into a regularized form. This type is further subdivided on the basis of size into one-handed and two-handed varieties, with two-handed manos defined as those greater than 15 cm along their longest axis.
- Mortars are deeply concave stones in which material was ground and/or pounded. They may be either bowl or bedrock forms.
- Pestles are handheld grinding stones used to press against and into a mortar. They are typically long, cylindrical, and rounded at one or both ends.
- Discoidals/cogstones are thick circular items that served an unknown function, but are associated with the Milling Stone tradition in California archaeological contexts.
- Abrading stones show parallel striations oriented longitudinally (rather than transversely) on one or more faces. Battering may also be present.
- Pendants/gorgetts are extensively ground on both surfaces and may have evidence of a biconically drilled hole.
- Unidentified groundstone are fragments that are too small to distinguish morphology or function. These have one or more ground/faceted surfaces, but the remaining portion is too small to infer artifact type.

**Hammerstones.** Typically, these artifacts are unmodified cobbles, initially reduced cores, or broken cores that exhibit battering on one or more edges. Three subclasses may be defined, two indicating the state of reduction of the artifact and the third indicating the degree of wear. The first subclass includes cobbles that lack signs of modification except for obvious battering at one

or more points on the cobble surface. The second subclass is cores that show battering on one or more previously flaked edges. The third subclass is pecking stones: pebbles or cobbles with lighter and more localized wear, often on a pointed projection of the cobble. For these specimens, lithic material, number of modified surfaces, and maximum measurements (length, width, thickness, and weight) can be recorded.

## FAUNAL ANALYSES

A minimum number of individuals indexed will be developed for the vertebrate sample. The purpose of vertebrate faunal analysis is twofold: (1) to identify the variety of fauna present in the local environment over a long period of time, and (2) to identify the species of animals and birds that were included in the human diet, and their ratios diachronically. Both aspects—environmental change and subsistence base—are integral to understanding prehistoric adaptations and historic uses of the area. Special attention to the possibility of faunal remains related to the Anza expedition will be included in the analysis.

## SPECIAL STUDIES

Special studies to be completed for the treatment program, as data facilitate, include the following:

- *Radiometric Analysis.* Selected charcoal and shell samples and other remains containing carbon (e.g., organics and bone) from key contexts will be submitted for radiocarbon assay. Approximately 10 samples will be submitted to establish the chronology of paleolandscapes for the paleoenvironmental reconstruction historic context, and another 10 will be submitted to date the chronology of sites and site components should sufficient data be recovered during the treatment program.
- *Obsidian Sourcing Analyses and Hydration.* Obsidian sourcing analysis is used for providing an idea of the regional exchange system within which prehistoric site occupants operated. Obsidian hydration analysis by source is useful for assigning relative chronological ages to the sites and associated materials.
- *Flotation, Pedological, and Chemical Analyses of Sediments.* Flotation analysis of cultural features, including subsequent macrobotanical identification, as necessary, is an important aspect of the evaluation program. Data can be used to address subsistence, site function, seasonality of occupation, internal site structure, and settlement type. Pedological and chemical analyses are useful for geomorphic studies, paleoenvironmental reconstructions, and postformation processes.
- *Ceramic Analyses.* Ceramic thin sectioning (sourcing).
- *Other Analyses and Assays.* Other types of artifact analyses and sample assays may be performed if sufficient data are recovered during the treatment program. These include (1) blood residue (immunological) analysis of selected lithic tools, (2) microscopic use/wear analysis of the edges of selected lithic tools, and (3) stable carbon isotope assay of bone samples from various taxa.

**ATTACHMENT B**  
**DAILY MONITORING LOG**

IMPERIAL VALLEY SOLAR PROJECT  
DAILY ARCHAEOLOGICAL MONITORING LOG

---

DATE: \_\_\_\_\_

ARCHAEOLOGICAL MONITOR: \_\_\_\_\_

FACILITY: \_\_\_\_\_

ARRIVAL: \_\_\_\_\_ LUNCH: \_\_\_\_\_ DEPARTURE: \_\_\_\_\_

PROJECT AREA(S): (Location) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

TYPE OF WORK AND EQUIPMENT: \_\_\_\_\_

\_\_\_\_\_

SUMMARY OF CONSTRUCTION ACTIVITIES PERFORMED: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

MONITORING ACTIVITIES PERFORMED (e.g., protection of ESA): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

CULTURAL RESOURCES PRESENT: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

NATIVE AMERICAN MONITOR (If present): \_\_\_\_\_

NON-COMPLIANCE: \_\_\_\_\_

\_\_\_\_\_

COMMENTS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

LOG FILED WITH MONITORING SUPERVISOR: \_\_\_\_\_

ATTACHMENT C  
CONTACT LIST

## CONTACT LIST

<b>AFFILIATION</b>	<b>TELEPHONE</b>	<b>EMAIL</b>	<b>NAME</b>
Bureau of Land Management Cultural Resources			
California Energy Commission			
Calico Solar LLC			
Construction Manager			
Monitoring Supervisor			
Principal Investigator			
Imperial County Coroner			

**APPENDIX J: EXAMPLE NAGPRA PLAN OF ACTION**

**DRAFT**  
**NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT**  
**PLAN OF ACTION:**

**A WRITTEN PLAN OF ACTION**  
**FOR THE TREATMENT OF**  
**INTENTIONALLY EXCAVATED OR INADVERTENTLY DISCOVERED**  
**HUMAN REMAINS, FUNERARY OBJECTS, SACRED OBJECTS,**  
**OR OBJECTS OF CULTURAL PATRIMONY**  
**FOR THE IMPERIAL VALLEY SOLAR PROJECT IN CALIFORNIA DESERT DISTRICT OF THE**  
**BUREAU OF LAND MANAGEMENT CALIFORNIA**

**Prepared For:**

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August 13, 2010

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
Introduction.....	L-1
Planned Action.....	L-1
Consultations.....	L-1
1) Objects to be considered as cultural items.....	L-2
2) Specific information to determine custody.....	L-3
3) Planned treatment, care, and handling of human remains.....	L-4
4) Planned archaeological recording of the human remains and cultural materials .....	L-6
5) Analysis planned for the human remains and cultural materials.....	L-6
6) Steps to be followed to contact Indian tribe officials at the time of intentional excavation ..	L-6
7) Kind of traditional treatment to be afforded the human remains .....	L-7
8) Nature of reports to be prepared .....	L-7
9) Planned disposition of human remains pursuant to 43 CFR 10.6 .....	L-7
10) The role of tribal monitors during survey and excavation.....	L-8
11) BLM personnel and tribal representatives involved in this NAGPRA effort.....	L-8
Federal Officials.....	L-9
Invited Signatories .....	L-10
 <u>Attachments</u>	
A	Upon The Discovery of Human Remains, Funerary Objects, Sacred Objects, or Objects of Cultural Patrimony
B	List of Native American Tribal Contacts

## **Introduction**

This Plan of Action (POA) describes the procedures for the treatment and disposition of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony (hereinafter, cultural items) for inadvertent discoveries during construction of the Imperial Valley Solar Project (IVSP or Project) located in the California Desert District (CDD) of the Bureau of Land Management (BLM), California. This POA complies with the requirements of the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S. Code (USC) 3001 et seq. and its implementing regulations as set forth in 43 Code of Federal Regulations (CFR) Part 10 (specifically §10.5[e]), and the Archaeological Resources Protection Act (ARPA), 16 USC 470aa-mm., with its implementing regulations (43 CFR Part 7).

## **Planned Action**

The IVSP would construct a 750-megawatt (MW) solar energy plant on approximately 6,500 acres of public lands in California administered by BLM CDD and the El Centro Field Office. The Project would use existing roads and construct new roads in the Project area.

The Project is located in western Imperial County, California, immediately east of the town of Ocotillo, west of the town of Seeley, and north and south of Interstate 8 (I-8). The Project will use the SunCatcher technology of Stirling Energy Services. Each SunCatcher consists of a 25-kilowatt solar power electric-generating system. The system is designed to track the sun automatically and to focus solar energy onto a Power Conversion Unit, which generates electricity. The system consists of an approximate 38-foot-high by 40-foot-wide solar concentrator dish that supports an array of curved glass mirror facets. The 300-MW Phase I of the Project will consist of approximately 12,000 SunCatchers. The 450-MW Phase II portion of the Project will include approximately 18,000 SunCatchers.

The Project will include the construction of a new 230-kilovolt (kV) substation approximately in the center of the Project. A Main Services Complex, where key buildings and parking areas will be located, will be constructed at the northeastern end of the Phase I Project. Main roads will be constructed with a combination of roadway dips and elevated sections across the dry washes on the Project. The full Phase II expansion of the Project will require the construction of the 500-kV Sunrise Powerlink transmission line that San Diego Gas & Electric (SDG&E) has proposed. A 230-kV transmission line that will be built for Phase I will parallel the current transmission line corridor for the Southwest Powerlink transmission line within the existing right-of-way (ROW). The main entry for truck traffic to the Project during construction will be from I-8 to the Project entrance on Evan Hewes Highway. During Project operation, the secondary and emergency access will be from Dunaway Road.

## **Consultations**

Based on previous consultation, the Campo Band of Kumeyaay Indians, the Cocopah Indian Tribe, the Fort Yuma Quechan Indian Tribe, the Ewiiapaayp Band of Kumeyaay Indians, the Jamul Indian Village, the Kwaaymii Laguna Band of Indians, the La Posta Band of Kumeyaay Indians, the Manzanita Band of Kumeyaay Indians, the San Pasqual Band of Diegueno Indians,

and the Santa Ysabel Band of Diegueno Indians (tribes) have been contacted for the IVSP and have indicated that the project is within ancestral territory. Additionally, sensitive areas have been identified in association with relic shorelines of ancient Lake Cahuilla. Should remains subject to NAGPRA be discovered during the course of construction, BLM will continue to consult with the interested tribes. These groups have been consulted with and have received a copy of this plan.

BLM's duty to consult with tribes does not include any obligation, implied or expressed, to fund or pay tribes or tribal members for their participation to consult or confer with BLM.

### **1) Objects to be considered as cultural items:**

For the purpose of this plan, the objects considered as cultural items are defined in 43 CFR 10.2 (d) and are as follows:

1. *Human remains* means the physical remains of a human body of a person of Native American ancestry. The term does not include remains or portions of remains that may reasonably be determined to have been freely given or naturally shed by the individual from whose body they were obtained, such as hair made into ropes or nets or individual teeth. For the purposes of determining cultural affiliation, human remains incorporated into a funerary object, sacred object, or object of cultural patrimony, as defined below, must be considered as part of that item (43 CFR 10.2[d][1]).
2. *Funerary objects* means items that, as part of the death rite or ceremony of a culture, are reasonably believed to have been placed intentionally at the time of death or later with or near individual human remains. Funerary objects must be identified by a preponderance of evidence as having been removed from a specific burial site of an individual affiliated with a particular Indian tribe or Native Hawaiian organization, or as being related to specific individuals or families or to known human remains. The term *burial site* means any natural or prepared physical location, whether originally below, on, or above the ground, into which, as part of the death rite or ceremony of a culture, individual human remains were deposited, and includes rock cairns or pyres that do not fall within the ordinary definition of a gravesite. For purposes of completing the summary requirements in §10.8 and the inventory requirements of §10.9 (43 CFR 10.2[d][2]), funerary objects can be further defined as follows:
  - (i) Associated funerary objects means those funerary objects for which the human remains with which they were placed intentionally are also in the possession or control of a museum or Federal agency. Associated funerary objects also means those funerary objects that were made exclusively for burial purposes or to contain human remains.
  - (ii) Unassociated funerary objects means those funerary objects for which the human remains with which they were placed intentionally are not in the possession or control of a museum or Federal agency. Objects that were displayed with individual human remains as part of a death rite or ceremony of a culture and

subsequently returned or distributed according to traditional custom to living descendants or other individuals are not considered unassociated funerary objects.

Funerary objects found in prehistoric burials in the Colorado Desert include, but are not limited to, arrowheads, shell beads, pendants, ceramic pots, and arrow shaft straighteners.

3. *Sacred objects* means items that are specific ceremonial objects needed by traditional Native American religious leaders for the practice of traditional Native American religions by their present-day adherents. While many items, from ancient pottery sherds to arrowheads, might be imbued with sacredness in the eyes of an individual, these regulations are specifically limited to objects that were devoted to a traditional Native American religious ceremony or ritual and that have religious significance or function in the continued observance or renewal of such ceremony. *Traditional religious leader* means a person who is recognized by members of an Indian tribe or Native Hawaiian organization (43 CFR 10.2[d][3]) as follows:

- (i) Being responsible for performing cultural duties relating to the ceremonial or religious traditions of that Indian tribe or Native Hawaiian organization, or

- (ii) Exercising a leadership role in an Indian tribe or Native Hawaiian organization based on the tribe or organization's cultural, ceremonial, or religious practices.

4. *Objects of cultural patrimony* means items having ongoing historical, traditional, or cultural importance central to the Indian tribe itself, rather than property owned by an individual tribal or organization member. These objects are of such central importance that they may not be alienated, appropriated, or conveyed by an individual tribal or organization member. Such objects must have been considered inalienable by the culturally affiliated Indian tribe or Native Hawaiian organization at the time the object was separated from the group (43 CFR 10.2[d][4]).

## **2) Specific information to determine custody:**

In the event of the removal of NAGPRA material on Federal lands, the following specific information will be used to determine custody:

1. Information provided by a lineal descendant(s) that can trace his or her direct relationship, without interruption, between themselves and the deceased by means of the traditional kinship system of the appropriate Indian tribe (43 CFR 10.2[b] and 43 CFR 10.14[b]).
2. Information provided by a Native American tribe, people, or culture that is indigenous to the United States and that can establish cultural affiliation by means of a relationship of shared group identity that can reasonably be traced historically or prehistorically between members of a present day Indian tribe and an identifiable earlier group (25 USC 3001[9], 43 CFR 10.2[e] and 43 CFR 10.14[c]).

3. The Federal agency official will determine cultural affiliation between a present-day individual or Indian tribe by a preponderance of evidence based on geographical, kinship, biological, archaeological, anthropological, linguistic, folkloric, oral traditional, historical, or other relevant information or expert opinion (25 USC 3005 [a][4], 43 CFR 10.2[e], and 43 CFR 10.14[e]).
4. Priority order of custody of the cultural materials will be consistent with 43 CFR 10.6 (a) as follows:
  - (1) In the case of human remains and associated funerary objects, in the lineal descendant of the deceased individual as determined pursuant to Sec. 10.14 (b);
  - (2) In cases where a lineal descendant cannot be ascertained or no claim is made, and with respect to unassociated funerary objects, sacred objects, and objects of cultural patrimony:
    - i. In the Indian tribe on whose tribal land the cultural items were excavated;
    - ii. In the Indian tribe that has the closest cultural affiliation with the cultural items as determined pursuant to Sec. 10.14 (c); or
    - iii. In circumstances in which the cultural affiliation of the cultural items cannot be ascertained, BLM is unable to prove a right of possession as defined at 43 CFR 10.10(a)(2), and the materials were excavated or removed from Federal land that is recognized by a final judgment of the Indian Claims Commission or the United States Court of Claims as the aboriginal land of an Indian tribe:
      - (A) In the Indian tribe aboriginally occupying the Federal land on which the cultural items were excavated, or
      - (B) If it can be shown by a preponderance of the evidence that a different Indian tribe has a stronger cultural relationship with the cultural items, in the Indian tribe that has the strongest demonstrated relationship with the objects.

BLM intends to repatriate human remains and associated funerary objects when cultural affiliation can be determined.

### **3) Planned treatment, care, and handling of human remains:**

All discovered remains will be treated with respect and dignity. BLM will provide the tribes an opportunity to examine remains prior to removal and to conduct traditional religious activities, if

this is feasible without delay that would endanger the remains. While BLM will provide the opportunity to view the remains prior to removal, the tribes are responsible for their travel expenses to and from the location of the discovery.

The IVSP will avoid any unnecessary disturbance, physical modification, or breakage of remains and the transport, inventory, or storage of human skeletal remains in locations separate from their associated funerary objects. Treatment will proceed according to the following provisions:

1. Representatives of the tribes will have the opportunity to be present during the exposure and removal of remains whenever possible. If agreed upon by BLM and the tribes, and if feasible, specific tribes may be designated to take the lead in initially responding to discoveries.
2. Remains will be excavated in accordance with the stipulations of the Monitoring and Discovery Plan approved under the terms of the Project's Programmatic Agreement (PA) for compliance with Section 106 of the National Historic Preservation Act (NHPA).
3. No destructive analyses of remains will be permitted without the written permission from BLM, and only after BLM has consulted with tribes regarding the planned treatment, care, and handling of any recovered human remains, funerary objects, sacred objects, or objects of cultural patrimony.
4. Drawings of remains and the locations of associated funerary objects will be made and may be published with BLM approval unless the claimants determine funerary objects are of a sensitive nature.
5. No pollen or flotation samples will be removed from burial pit fill dirt without the written permission of BLM, and only after BLM has consulted with tribes regarding such removal.
6. Transportation of cultural items will be minimized under all circumstances and will be carefully packed to avoid disturbance or damage. Human remains may be packed separately from their associated funerary objects, but the containers will be kept together at all times.
7. Representatives of the tribes will be afforded the opportunity to view all artifact collections and records resulting from the archaeological investigation to identify funerary objects, objects of cultural patrimony, or sacred objects. If such objects are identified, BLM will be notified by the tribes and consultation will be initiated regarding their consistency with NAGPRA criteria for identification of these classes of objects and their treatment and disposition.
8. IVSP is responsible for ensuring the security of cultural items from vandalism or other disturbance through employment of security personnel, fencing, and other appropriate measures, as needed. If human remains are endangered by exposure or other factors, IVSP's approved cultural resources/archaeological contractor may be authorized by BLM

to proceed with removal of the cultural items to their facility to protect the cultural items. Written notice of this action must be provided to the claimants and agencies within 3 days of removal.

9. IVSP will not resume construction in the buffer area surrounding the discovery until it has received written authorization to proceed based on procedures established in the treatment plans as prescribed in the PA. In addition, no news releases, including photographs, videotapes, written articles, or other means of information, shall be released by any party unless approved by BLM and the tribe(s).

#### **4) Planned archaeological recording of the human remains and cultural materials:**

All cultural items, as defined in this POA, will be appropriately recorded and described using current standards and following current archaeological practices and methods. The archaeological documentation of human remains will be limited to visually evident characteristics that indicate such things as age, gender, obvious pathologies, and any obvious visual traits that may help to indicate cultural affiliation. Funerary objects will be recorded at a descriptive non-invasive level including measurements, type, and morphology. If human remains and/or cultural items are removed from the site, a catalogue of these items will be maintained.

#### **5) Analysis planned for the human remains and cultural materials:**

Initially, only non-destructive analyses will be carried out on the human remains. These can include anthropometric analyses (measurements/weight), mapping, drawing, measuring, weighing, and photo documentation. After consultation with the tribe(s), other tests may be determined appropriate by BLM.

Likewise, only non-destructive analyses will be carried out initially on the associated funerary objects, unassociated funerary objects, sacred items, and objects of cultural patrimony. These can include measuring and weighing, drawing, mapping, photographing, X-raying, and X-ray fluorescence analysis. After consultation with the tribe(s), other tests may be authorized by BLM.

#### **6) Steps to be followed to contact Indian tribe officials at the time of intentional excavation:**

In the event of a discovery, IVSP's approved cultural resources contractor/permittee will notify BLM and the appropriate land managing agency within 24 hours and may be authorized to undertake limited additional excavation and examination to assess whether the materials are within the protected classes of remains covered by the PA. The notification will include the following information:

- A. A verbal description of what was found and the context in which NAGPRA items are located
- B. The location of the NAGPRA items
- C. A preliminary assessment of the type of NAGPRA items

- D. An assessment of the complexity of the burial(s), human remains, and/or other NAGPRA items, and the likelihood of disturbance if left in place
- E. Any other pertinent information

BLM shall notify the tribes promptly after the initial discovery of items protected under NAGPRA and provide written confirmation by certified mail, or alternatively Express Mail, of the discovery within 3 working days (see Attachment A and B). The information to be provided to the tribes will include the following:

- A. A verbal and written description of what was found and the context in which NAGPRA items are located
- B. The location of the NAGPRA items
- C. A preliminary assessment of the type of NAGPRA items
- D. An assessment of the complexity of the burial(s), human remains, and/or other NAGPRA items, and the likelihood of disturbance if left in place
- E. A request that the tribe(s) respond within 24 hours if the tribe(s) wish to view the remains or objects in place
- F. Any other pertinent information

BLM will additionally afford the tribes the opportunity to conduct field visits, viewings of the items in question, and appropriate and reasonable ceremonies or rituals related to the items in question. The tribes are responsible for any costs to and from the discovery site.

#### **7) Kind of traditional treatment to be afforded the human remains:**

The tribes will be afforded the opportunity to examine the remains prior to and during removal unless the remains are in direct danger of further disturbance or destruction. Tribal representatives will be afforded the opportunity to perform traditional treatments, as needed, to the remains.

#### **8) Nature of reports to be prepared:**

A comprehensive report on the results of the archaeological investigation, including the recovery of cultural items, will be prepared and distributed in accordance with the terms of the aforementioned PA, developed in accordance with Section 106 of the NHPA.

#### **9) Planned disposition of human remains pursuant to 43 CFR 10.6:**

In the event that discovered NAGPRA items must be removed, BLM will determine, pursuant to 43 CFR 10.6, which Native American tribe will receive custody of the items. BLM intends to repatriate human remains and associated funerary objects when cultural affiliation can be determined. BLM will provide notification of intent to transfer possession and subsequently return the items to the appropriate tribe within the limitations of 43 CFR 10.15.

Upon determination of a lineal descendant(s) or culturally affiliated tribe that, under Federal regulations, appears to be entitled to custody of the human remains, the agency official will

transfer custody of the deceased to that lineal descendant or culturally affiliated tribe in accordance with 43 CFR 10.6(c).

Prior to any such disposition, the agency official will publish a general notice of the proposed disposition in three separate newspapers of general circulation in the areas where interested tribes now reside. The notices will be published at least two times at least 1 week apart, and the transfer will not take place until at least 30 days after publication of the second notice to allow time for any additional claimants to come forward.

If additional claimants do come forward and the agency official cannot clearly determine which claimant is entitled to custody, the agency official will not transfer custody of the deceased until such time as the proper recipient is determined, pursuant to regulations found at 43 CFR 10.

In the event the remains are of Native American descent, but are not claimed by any tribe within the geographical area, they will not leave the custody of the Federal agency. Should custody of remains be transferred to claimant tribes under 10.6, the tribes may request reburial on BLM land. Reburial of NAGPRA items on lands administered by BLM is subject to the provisions found in Instructional Memorandum No. 2007-002. The reburial locations will be determined through consultation with the tribes, and any locational information will be kept confidential to the extent allowed by law.

#### **10) The role of tribal monitors during survey and excavation:**

Individuals who are approved tribal monitors on the Project will notify the Principal Investigator(s) about items they feel are funerary objects, sacred objects, and/or objects of cultural patrimony. The Principal Investigator will notify BLM within 24 hours that monitors identified funerary objects, sacred objects, and/or objects of cultural patrimony. The report will include a description of the find(s), photograph(s) or drawing(s) were applicable, artifact(s) numbers or identification were applicable, and a description of the tribal monitor's opinion(s).

#### **11) BLM personnel and tribal representatives involved in this NAGPRA effort:**

As a result of tribal consultation, the following parties will be involved in this NAGPRA effort:

Campo Band of Kumeyaay Indians, the Cocopah Indian Tribe, the Fort Yuma Quechan Indian Tribe, the Ewiiapaayp Band of Kumeyaay Indians, the Jamul Indian Village, the Kwaaymii Laguna Band of Indians, the La Posta Band of Kumeyaay Indians, the Manzanita Band of Kumeyaay Indians, the San Pasqual Band of Diegueno Indians, and the Santa Ysabel Band of Diegueno Indians (tribes), and the Ah-Mut Pipa Foundation and Kumeyaay Cultural Repatriation Committee (Tribal Organizations).

The names and addresses of the tribal members are in Attachment B.

**Federal Officials**

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California State Director, Bureau of Land Management Date

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California Desert District Manager, Bureau of Land Management Date

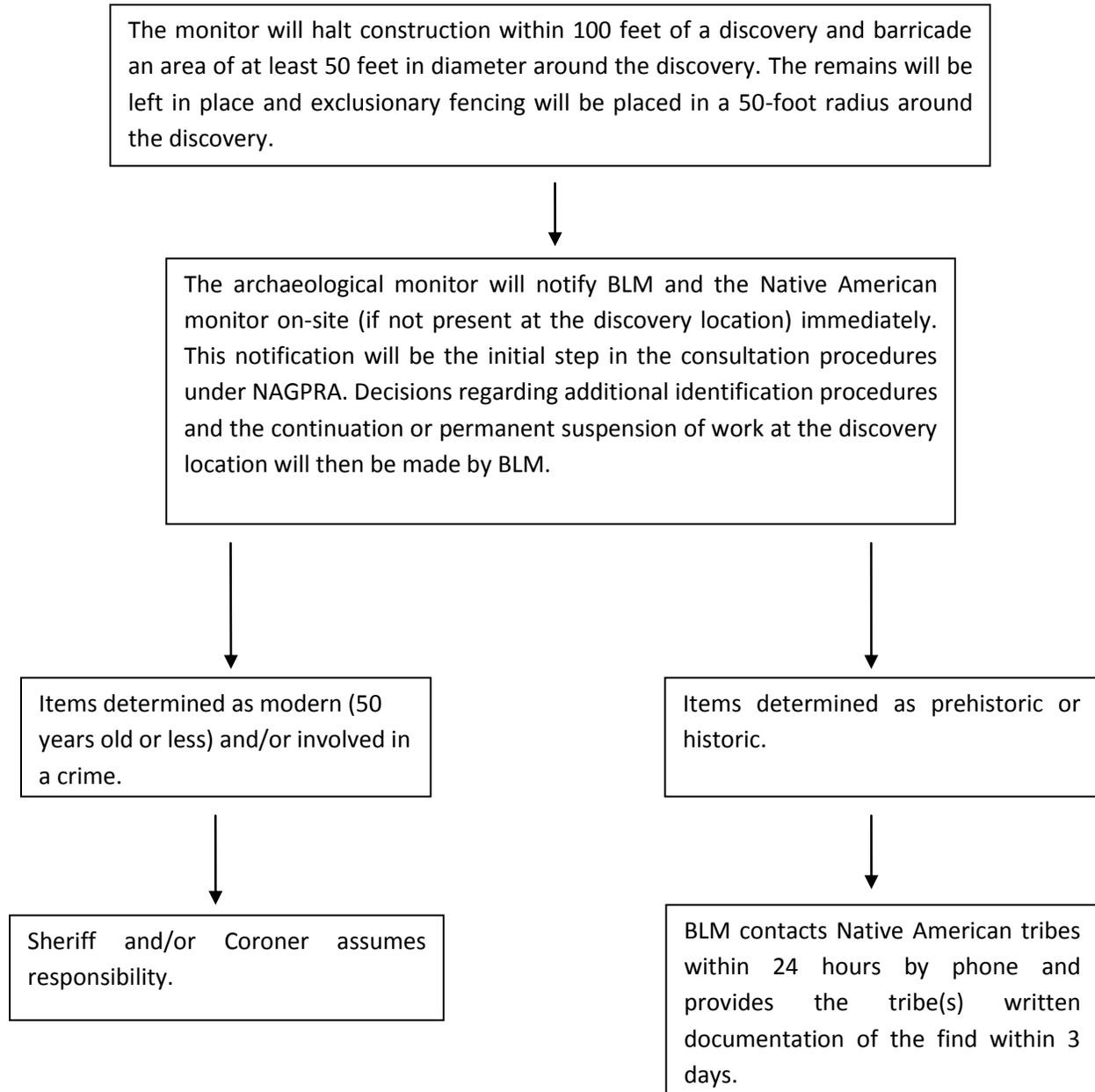
## Invited Signatories

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Date

## Attachment A

### Upon The Discovery of Human Remains, Funerary Objects, Sacred Objects, or Objects of Cultural Patrimony



**Attachment B**

**List of Native American Tribal Contacts**