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Air Quality

Testimony of Jacquelyn Leyva Record

I am the author of the air quality section of the staff assessment for the Blythe Solar Power Project, now proposed as a 485 megawatt (MW) solar photovoltaic (PV) facility. I have reviewed the applicant's comments and suggested edits to the staff-proposed conditions of certification in the air quality section. I also reviewed the air quality section conditions of certification in the Energy Commission's Final Decision for the original Blythe Solar Thermal project, proposed as a 1,000 MW solar parabolic trough facility. I concur with the changes as proposed by the applicant. Specifically:

1. AQ-SC5 as adopted by the Energy Commission for the original solar thermal trough facility is sufficient to mitigate construction impacts, which are expected to be reduced in the amended PV facility.
2. AQ-SC6 should no longer reference the word "mirror" and should be stricken and replaced with the word "panel".
3. Conditions AQ-61 to AQ-64 are no longer relevant to the modified project and should be removed from the decision.

With these changes, the Blythe Solar Power Project PV facility would comply with all applicable Laws, Ordinances, Regulations and Standards and impacts would be mitigated such that they would be less than CEQA significant as discussed in my Staff Assessment section.

NOISE AND VIBRATION

Testimony of Shahab Khoshmashrab

I am the author of the Noise and Vibration section of the Staff Assessment. I have reviewed the comments and suggested edits to the Conditions of Certification by the project applicant. I also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe Solar Thermal project. After considering the information in my Staff Assessment and the suggested edits I concur with the change to Condition of Certification NOISE-6, proposed by the project applicant in its filing dated November 7, 2013. The changes are consistent with the language in the existing license and address significant project construction impacts, as described in my Staff Assessment, associated with the proposed photo voltaic project.

GEOLOGY AND PALEONTOLOGY

Testimony of Casey Weaver, CEG

I am the author of the Geology and Paleontology section of the Staff Assessment of the Blythe Solar Project amendment. I have reviewed comments and suggested edits to the Conditions of Certification by various stake holders. I also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe Solar Thermal project. After considering the information in my Staff Assessment and the suggested edits, I am making the following changes to the conditions which are consistent with the existing license and address significant project impacts, as described in my Staff Assessment section, associated with the proposed photovoltaic project.

The approved Blythe Solar Thermal project was to construct a solar trough project consisting of parallel rows of solar troughs built upon a uniformly flat surface prepared by extensive site grading. While this construction method would permanently alter the surface of the land, during the grading and excavation operations, paleontological resources were expected to be uncovered and discovered during construction monitoring. It is likely that in the course of the grading and excavation operation some fossils would be damaged prior to discovery by observers. However, staff believes that numerous undamaged fossils would be discovered, collected, identified and curated and the results would have been made available to the scientific community that studies that sort of thing.

It is stated in several documents that the fossils found in recent large scale construction sites in the Chuckwalla Valley would not have been discovered if it wasn't for the construction that took place.

In the final decision of the approved project it was acknowledged that the BSPP site is underlain by soils highly likely to contain fossils and that mitigation afforded in Conditions of Certification **PAL 1-7** would decrease the project's impacts to paleontological resources to less than significant.

Rather than extensive site modification and grading which would yield discovery of paleontological resources, the amended project proposes to drive 213,885 steel posts, to a depth between 8 and 12 feet covering an area over 4,000 acres in size.

While staff appreciates the advantages of the post insertion methodology regarding project cost and impact to other disciplines, the posts would be inserted into soils likely to contain fossils, destroying those fossils in which the posts come into contact.

In order to discover, recover and record the type and variety fossils in the solar field before the area is affected by post insertion, staff has proposed mitigation to that impact in proposed Condition of Certification **PAL-9**.

In summary, **PAL-9** would require the project owner to conduct a subsurface sampling program to recover fossils from the solar field prior to construction. This sampling program would allow for representative recovery and curation of fossils in the solar field area that will aid the scientific community in understanding the paleoecology of the site and region. It is staff's belief that this understanding of the paleoecology of the area will mitigate the expected direct, indirect and cumulative impacts due to the construction of the proposed project.

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

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

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

Following completion of the field work, the project owner shall document the findings and interpretations in a paleontological characterization report. The paleontological characterization report shall contain, *but not be limited to*:

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

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

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

~~**A. Provide an assessment of how avoidance of the sensitive geologic units containing significant paleontological resources may be accomplished so impacts can be minimized. The CPM shall review and approve the assessment prior to implementation.**~~

~~**B. Where avoidance cannot be achieved in all or part of the solar field the Project Owner shall provide an assessment of alternative foundations design and construction methods that may be used in the areas where significant paleontological resources are identified. The CPM shall review and approve the assessment prior to implementation.**~~

C. ~~Where avoidance and alternative foundation design and construction cannot be accomplished~~ *T*he project owner shall *assure the* ~~conduct additional excavation and~~ collection of paleontological resources *are*

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

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

Verification:

1) **At least 90 days prior to the start of ground disturbance, the project owner shall submit the paleontological *subsurface* characterization plan to the CPM for review and approval.**

2) **~~At least 30 days prior to in the ground disturbance, the project owner shall initiate field work in the areas where ground disturbance will first be conducted. The field work shall proceed sequentially in areas scheduled for panel foundation installation and shall precede panel foundation installation by a period of not less than 7 days.~~**

3) **At least 30 days prior to ~~ground disturbance~~ *installation of pylons in the solar field*, the project owner shall provide *to the CPM for review and comment, the draft characterization report and records showing that adequate collection, identification and curation of sensitive paleontologic resources has been completed*~~a panel foundation construction schedule to the CPM~~.**

4) **~~No more that 90 days after completion of panel foundation construction, the project owner shall provide the CPM a draft paleontological characterization report for review and comment.~~**

5) **The findings of the solar field paleontological characterization shall be incorporated into the PRR required in PAL -7, above.**

SOIL AND WATER RESOURCES

Testimony of Abdel-Karim Abulaban, P.E

I am the author of the Soil and Water Resources section of the Staff Assessment for the amended Blythe Solar Power Project, now proposed as a 485 megawatt (MW) solar photovoltaic (PV) facility. The Staff Assessment I authored contained some erroneous or outdated information that had been superseded during the evidentiary proceedings on the original solar thermal project. While my overall analysis is still applicable the purpose of this testimony is to correct and update specific information in the Staff Assessment, as set forth below, which is consistent with the Final Decision on the original solar thermal project and my previous analysis.

Table 1 can be found on page 4.9-1 of my Staff Assessment of the amended project. This table supersedes the table in my Staff Assessments.

Soil & Water Resources Table 1

Summary of Proposed Modifications to Conditions of Certification

Condition of Certification	Proposed Modification(s) to Condition
SOIL&WATER-1	**Drainage Erosion And Sedimentation Control Plan** (DESCP): Edit to item N which references SOIL&WATER-15.
SOIL&WATER-2	**Mitigation Of Surface Water Impacts**: No change from the final decision.
SOIL&WATER-3	**Project Groundwater Wells, Pre-Well Installation**: No change from the final decision except the number of wells is being reduced from 10 to three so the condition should reflect the new number.
SOIL&WATER-4	**Construction And Operation Water Use**: Revise to change the limit of water usage and construction duration consistent

Condition of Certification	Proposed Modification(s) to Condition
	with the project description.
SOIL&WATER-5	**Groundwater Level Monitoring, Mitigation And Reporting**: No change from the final decision.
SOIL&WATER-6	**Compensation For Well Impacts**: No change from the final decision.
SOIL&WATER-7	**Waste Discharge Requirements**: Revise requirements specified in Appendix B, C, and D consistent with the modified project.
SOIL&WATER-8	**Septic System And Leach Field Requirements**: No change from the final decision.
SOIL&WATER -9	**Groundwater Production Monitoring**: No change from the final decision.
SOIL&WATER-10	**Facility Closure Plan**: Text changed to match language in the **General Conditions** section.
SOIL&WATER-11	**Revised Project Drainage Report And Plans**: Edit to remove references to collector channels, conveyance channels, channel confluences, swales, HTF, soil cement, and drop structures.
SOIL&WATER-12	**Detailed Flo-2D Analysis**: Revise to remove references to collector channels, end diffuser structures, and berms.
SOIL&WATER-13	**Drainage Channel Design**: Delete.
SOIL&WATER-14	**Channel Erosion Protection**: Delete.
SOIL&WATER-15	**Channel Maintenance Program**: Delete.
SOIL&WATER-16	**Estimation Of Surface Water Impacts**: No change from the final decision.
SOIL&WATER-17	DELETED in the final decision for original project. No changed from final decision.

Condition of Certification	Proposed Modification(s) to Condition
SOIL&WATER-18	**Non-Transient, Non-Community Water System**: DELETE; no longer needed because the project will not meet non-transient non-community conditions
SOIL&WATER-19	**Storm Water Damage Monitoring and Response Plan**: NEW

The Conditions of Certification Soil & Water-2 and 16 contained outdated language and headings and should be replaced by Soil & Water-2 and 16 and relevant headings as found in the Final Decision on the solar thermal project. In the Final Decision the Commission found, based on substantial evidence, that with implementation of mitigation, potential project related impacts to water resources would be reduced below a level of significance and that the project complies with all applicable laws, ordinances, regulations and standards. In addition, the project does not require an entitlement of Colorado River water to pump groundwater. Because the modified Blythe PV project uses considerably less water than the licensed project, impacts to water resources are reduced and no additional mitigation is required. Therefore the same Conditions of Certification numbers 2 and 16 as found in the Final Decision should be adopted as the mitigation for the amended PV project.

Because the modified Blythe PV project uses considerably less water than the licensed project, impacts to water resources are reduced and no additional mitigation is required. Therefore, Condition Soil & Water-17 is not necessary and was erroneously included in the Staff Assessment. As with the Final Decision, this condition should be eliminated.

Any reference to a Condition of Certification that has been removed which is found in the discussion should be considered stricken.

The Condition of Certification Soil & Water-4 contains the following language that needs to be removed because it references Condition 18 which is no longer applicable.

> ~~Water quality used for project construction and operation will be reported in accordance with Condition of Certification **SOIL&WATER-18** as applicable to ensure compliance with this Condition~~

Staff concurs with the applicants suggested change in Soil & Water 19 to substitute the term “withstand” with “are designed to accommodate.”

For condition Soil & Water -19, staff considered the revisions proposed by the applicant which were intended to address their concern about lack of flexibility in the condition. They are concerned there could be changes in hydrologic and hydraulic standards which would require an amendment to modify the condition in response to new standards. In order to add some flexibility to the condition, the applicant proposed to move parts of the condition to the verification section.

Staff concurs that the condition may be interpreted to be limited in what methods should be used for determining appropriate mitigation but disagrees with the applicant's proposal to move parts of the condition to the verification. Staff proposes to add the sought flexibility to the condition by adding language that would allow the CPM to review and approve methods that should be used if standards change. The condition as modified is as follows (the proposed modifications are in strike through and underline):

SOIL&WATER-19 The project owner shall reduce impacts caused by large storms by ensuring solar panels, drainage washes that will have solar panels, and perimeter fencing ~~withstand~~ <u>are designed to accommodate</u> the 100-year storm event, establishing ongoing maintenance and inspection of storm water controls, and implementing a response plan to clean up damage and address ongoing issues.

The project owner shall ensure that the solar panels, drainage washes that will have solar panels are designed and installed to ~~withstand~~ <u>accommodate</u> storm water scour that may occur as a result of a 100-year, 24-hour storm event. The analysis of the storm event and resulting pylon stability shall be provided within a Pylon Insertion Depth and Solar Panel Stability Report to be completed by the project owner. This analysis shall incorporate results from site-specific geotechnical stability testing, as well as hydrologic and hydraulic storm water modeling performed by the project owner. The modeling shall be completed using methodology and assumptions approved by the CPM.

The project owner shall also develop a Storm Water Damage Monitoring and Response Plan to evaluate potential impacts from storm water, including damage to drainage washes, perimeter fencing, and solar panel supports that fail due to storm water flow or otherwise break and scatter ~~mirror~~ <u>panel</u> debris or other potential pollutants on to the ground surface.

The basis for determination of pylon embedment depths shall employ a step-by-step process as identified below and approved by the CPM:

A. Determination of peak storm water flow within each sub-watershed from a 100-year event:

- **Use of *Riverside County Flood Control and Water Conservation District Hydrology Manual (Riverside County Manual)* <u>*or other methodologies approved by the CPM*</u> to specify hydrologic parameters to use in calculations; and**
- **Flo-2D model (or other approved models) must be developed to calculate storm flows from the mountain watersheds upstream of the project site, and flood flows at the project site, based upon hydrologic parameters from Riverside County.**

B. Determination of potential total pylon scour depth:

- **Potential channel erosion depths must be determined using the calculated design flows, as determined in A above, combined with Flo-2D to model onsite sediment transport.**
- **Potential local scour must be determined using the calculated design flows, as determined in A above, combined with the Federal Highway Administration (FHWA) equation for local bridge pier scour from the FHWA 2001 report, "Evaluating Scour at Bridges" <u>or other similar methodologies approved by the CPM.</u>**

C. The results of the scour depth calculations and pylon stability testing must be used to determine the minimum necessary pylon embedment depth within the active channels. In the inactive portions of the alluvial fans that are not subject to channel erosion and local scour, the minimum pylon embedment depths must be based on the results of the pylon stability testing.

D. The results of the calculated peak storm water flows and channel erosion and pylon scour analysis together with the recommended pylon installation depths shall be submitted to the CPM for review and approval sixty (60) days prior to the start of solar panel installation.

The Storm Water Damage Monitoring and Response Plan shall be submitted to the CPM for review and approval and shall include the following:

- **Detailed maps showing the installed location of all solar panels within each project phase;**
- **Description of the method of removing all soil spoils should any be generated;**

- **Each solar panel should be identified by a unique ID number marked to show initial ground surface at its base, and the depth of the pylon below ground;**
- **Minimum Depth Stability Threshold to be maintained ~~of~~ at pylons to ensure ~~meet~~ long-term stability under ~~for~~ applicable wind, water (flowing and static), and debris loading effects;**
- **Above and below ground construction details of a typical installed solar panel;**
- **BMPs to be employed to minimize the potential impact of broken ~~mirrors~~ panels to soil resources;**
- **Methods and response time of ~~mirror~~ panel cleanup and measures that may be used to mitigate further impact to soil resources from broken ~~mirror~~ fragments; and**
- **Monitoring, documenting, and restoring the adjacent offsite downstream property when impacted by sedimentation or broken ~~mirror~~ panel shards.**

A plan to monitor and inspect periodically, before first seasonal and after every storm event:

- **Security and Tortoise Exclusion Fence: Inspect for damage and buildup of sediment or debris**
- **Solar panels within drainages or subject to drainage overflow or flooding: Inspect for tilting, mirror damage, depth of scour compared to pylon depth below ground and the Minimum Depth Stability Threshold, collapse, and downstream transport.**
- **Drainage washes: Inspect for substantial migration or changes in depth, and transport of broken ~~glass~~ panels.**
- **Adjacent offsite downstream property: Inspect for changes in the surface texture and quality from sediment buildup, erosion, or broken ~~glass~~ panels.**

Short-Term Incident-Based Response:

- **Security and Tortoise Exclusion Fence: repair damage, and remove built-up sediment and debris.**
- **Solar panels: Remove broken ~~glass~~ panels, damaged structure, and damaged wiring from the ground, and for pylons no longer meeting the Minimum Depth Stability**

Threshold, either replace/reinforce or remove the panels to avoid exposure to broken glass.

- **Drainage washes: no short-term response necessary unless changes indicate risk to facility structures.**

Long-Term Design-Based Response:

- **Propose operation/BMP modifications to address ongoing issues. Include proposed changes to monitoring and response procedures, frequency, or standards.**
- **Replace/reinforce pylons no longer meeting the Minimum Depth Stability Threshold or remove the ~~mirrors~~ panels to avoid ~~exposure for~~ impacts from broken ~~glass~~ panels.**
- **Propose design modifications to address ongoing issues. This may include construction of active storm water management diversion channels and/or detention ponds.**

Inspection, short-term incident response, and long-term design based response may include activities both inside and outside of the project boundaries. For activities outside of the project boundaries the owner shall ensure all appropriate environmental review and approval has been completed before field activities begin.

Verification: At least sixty (60) days prior to installation of the first pylon, the project owner shall submit to the CPM a copy of the Pylon Insertion Depth and Solar Panel Stability Report for review and approval prior to construction.

At least sixty (60) days prior to commercial operation, the project owner shall submit to the CPM a copy of the Storm Water Damage Monitoring and Response Plan for review and approval prior to commercial operation. The project owner shall retain a copy of this plan onsite at all times. The project owner shall prepare an annual summary of the number of solar panels that fail due to damage, cause and extent of the damage, and cleanup and mitigation performed for each damaged solar panels. The annual summary shall also report on the effectiveness of the modified drainage washes against storms, including information on the damage and repair work or associated erosion control elements. The project owner shall submit proposed changes or revisions to the Storm Water Damage Monitoring and Response Plan to the CPM for review and approval.

TRANSMISSION LINE SAFETY AND NUISANCE

Testimony of Obed Odoemelam, Ph.D.

I am the author of the Transmission Line Safety and Nuisance section of the Staff Assessment. I have reviewed the comments and suggested edits to the Conditions of Certification by the project applicant. I also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe Solar Thermal project. After considering the information in my Staff Assessment and the suggested edits I concur with the change to Condition of Certification TLSN-1, proposed by the project applicant in its filing dated November 7, 2013. The changes are consistent with the language in the existing license and address significant project impacts, as described in my Staff Assessment, associated with the proposed photo voltaic project.

Blythe Solar Power Project
Traffic and Transportation Conditions of Certification
Testimony of John Hope

I am the author of the Traffic and Transportation section of the Staff Assessment. I have reviewed the comments and suggested edits to the Conditions of Certification by the project owner. I also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe solar thermal project. After considering the information in my Staff Assessment and the suggested edits proposed by the project owner in its filing titled *Blythe Solar Power Project's Revised Petition to Amend*, dated April 11, 2013, I concur with keeping Conditions of Certification TRANS-2 as written in the Final Decision for the original Blythe project. The conditions will mitigate significant project impacts, as described in my Staff Assessment. Revisions to TRANS-2 were made in response to a request by Caltrans during the proceedings for the Palen Solar Electric Generating System (PSEGS). During the evidentiary hearings for PSEGS, Energy Commission staff and Caltrans agreed to remove the level of service (LOS) standard. Therefore, the LOS standard should also be removed from TRANS-2 for the Blythe project.

For Condition of Certification TRANS-13, I agree with the project owner's suggested edits because the changes would clarify the actions of the project owner needed to reduce reflectivity of panel support structures, as described in my Staff Assessment, associated with the proposed photovoltaic project.

Blythe Solar Power Project
Transmission System Engineering
Testimony of Mark Hesters

I was one of the authors of the Transmission System Engineering section of the Staff Assessment. I reviewed Condition of Certification TSE-5 in the Final Decision for the original Blythe Solar Thermal project as well as the project amendment and data responses filed by the project Applicant. After considering the information in my Staff Assessment and the language in the Final Decision, I find that the language in the Final Decision for TSE-5 is adequate for the amended project because the condition as written in the Final Decision addresses significant project impacts, as described in my Staff Assessment, associated with the proposed photo voltaic project.

WASTE MANAGEMENT
Testimony of Christopher Dennis

I am the author of the Waste Management section of the Staff Assessment. I have reviewed the comments and suggested edits to the Conditions of Certification by the project owner. There were no comments or suggested edits by any other commenting party. I also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe Solar Thermal project. The following Conditions of Certification have received no comments or edits: **WASTE-2** through **WASTE-7**. The project owner and I concur that **WASTE-8** should be deleted as stated in its filing dated November 7, 2013, "Nextera Blythe Solar Energy Center LLC's Initial Comments on the Staff Assessment, Parts A and B."

After considering the information in my Staff Assessment and the suggested edits, I concur with the project owner in its filing referenced above to leave Conditions of Certification **WASTE-1**, **WASTE-9**, and **WASTE-10** unchanged, as written in the Commission Decision. Leaving Condition of Certification **WASTE-1** unchanged is consistent with the original impact analysis which addressed significant project impacts and is consistent with a project that would required less ground disturbance. Leaving Conditions of Certification **WASTE-9** and **WASTE-10** unchanged is consistent with the original impact analysis, which addressed significant project impacts.

BSPP Revised Fire Mitigation

Testimony of Alvin Greenberg, Ph.D.

Staff is proposing to revise Condition **WORKER SAFETY-7** to require an annual escalator for the annual payment for Operations and & Maintenance (O&M) to mitigate the direct impacts of the BSPP on the Riverside County Fire Department. Reasons for this proposal include:

1. Mitigation should be real and effective and in order for it to be so, inflation should not be allowed to erode the purchasing power of the mitigation payments. At inflation rates experienced in the U.S. over the past 10 years, the purchasing power of the annual mitigation payment proposed ($100,000/year) would be reduced by 50% (to $50,000/year) after 20 years and even further eroded by the end of the project's lifespan (30 years). Therefore, without an annual escalator, the mitigation would no longer be adequate, real, or effective.
2. Since this payment is for annual O&M, it would be used for maintenance of equipment, replacement of equipment, and fire fighter salaries. Fire fighter salaries will rise after a number of years and more importantly, a fire engine has a useful life-span of no more than 15 years for front-line service and is then used as a reserve for 5 more years. After 20 years, it is removed totally from service. Thus, without an annual escalator, sufficient mitigation would not be provided to partially cover these increased costs.
3. This project is proposed to be built on Federal land and thus is exempt from property taxes or the Riverside County "B-29" tax, each of which has an annual escalator. Therefore, if the project were to pay those taxes, the project would be subject to an annual increase.

During the November 12, 2013 workshop, Staff and the Project Owner, with concurrence from Riverside County agreed to the use of a 2% escalator as reflected in Worker Safety-7 below.

Staff did not propose this escalator for the original Blythe solar or Palen solar projects -- and has not proposed this escalator for fire mitigation for other solar and non-solar projects in the past – because all past project applicants arrived at a fire mitigation amount by stipulated agreement with the local fire departments or via another mechanism dictated by a Decision. In the future, staff will continue to honor all reasonable stipulated agreements between applicants and fire departments and not require an escalator if the fire departments and applicants do not include it in a negotiated agreement. However, staff will propose the escalator in the future when staff must determine the level of mitigation.

Staff's proposed revised **WORKER SAFETY-7**:

WORKER SAFETY-7 The project owner shall ~~either:~~

~~(1) Reach an agreement, either individually or in conjunction with a power generation industry association or group that negotiates on behalf of its members, with the Riverside County Fire Department (RCFD) regarding funding of its project-related share of capital and operating costs to build and operate new fire protection/response infrastructure and provide appropriate equipment as mitigation of project-related impacts on fire protection services within the jurisdiction; **or**~~

~~(2) Shall~~ fund its share of capital costs in the amount of ~~$825,000~~ **$250,000** and provide an annual payment of ~~$375,000~~ **$100,000** to the RCFD for the support of ~~new fire department staff and~~ construction, operations and maintenance commencing with the start of ~~construction~~ **site mobilization** and continuing annually thereafter. **All annual payments after the initial payment shall be subject to an annual escalator of 2%** on the anniversary until the final date of power plant **non-operation and facility closure.**

~~**Verification:** At least thirty (30) days prior~~ **Not less than fifteen (15)** days after ~~to~~ the start of site mobilization, the project owner shall provide to the CPM~~:~~

~~(1) A copy of the individual agreement with the RCFD or, if the owner joins a power generation industry association, a copy of the bylaws and group's agreement/contract with the RCFD; **or**~~

~~(2) D~~ documentation that the amount of ~~$850,000~~ **$250,000** has been paid to the RCFD, documentation that the first annual payment of ~~$375,000~~ **$100,000** has been ~~made~~ **paid to the RCFD**, and shall also provide evidence in each January Monthly Compliance Report during construction and the Annual Compliance Report during operation that subsequent annual payments **plus the annual escalator** have been made.

Worker Safety and Fire Protection

Testimony of Alvin Greenberg, Ph.D.

I was the author of the **Worker Safety and Fire Protection** section of the Staff Assessment. I have reviewed the comments and suggested edits to the Conditions of Certification by the project petitioner. I also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe Solar Power Plant project. After considering the information in my Staff Assessment (SA) and the suggested edits by the petitioner, I do not concur with the changes proposed by the petitioner in its filing titled NextEra Blythe Solar Energy Center LLC's Initial Comments on the Staff Assessment, Parts A and B, dated Nov. 7, 2013 for the following conditions because the changes do not address significant project impacts, as described in my Staff Assessment, associated with the proposed photo voltaic project:

- **WORKER SAFETY-8**
- **WORKER SAFETY-10**

WORKER SAFETY-8 was revised to reflect the latest understanding of the threat posed by the fungus (*C.immitis*) that causes Valley Fever (VF) and therefore included a proposed new requirement not found in the Decision to conduct upwind and downwind PM10 monitoring during the construction phase. The petitioner argues that because Riverside County is not among the highest areas of concentrations of the fungus that causes Valley Fever, that construction activities might not be a cause of VF outbreaks, and that the mechanics of particulate matter less than 10 microns (PM10) monitoring may not provide useful information in real-time, this newly proposed addition to **WORKER SAFETY-8** should be removed. Staff does not agree with the petitioner for the following reasons:

1. Although Riverside County has not experienced VF incidences as high as Kern, Kings, Tulare, or San Luis Obispo counties, other counties including Los Angeles, San Diego, San Bernardino, and Riverside also have reported VF cases (SA page 4.14-15). Riverside County is also described by the Centers for Disease Control (CDC), the California Department of Public Health (CDPH), and in the SA (page 4.14-16 and 4.14-17) as being endemic with the fungus and that the total number of VF cases nationwide rose by nearly 900 percent from 1998 to 2011 with most being in the desert southwest. Therefore, while not being among the highest areas in the desert southwest for the presence of the fungus or in case of VF, Riverside County ranks in the top group nation-wide and is considered by staff, the CDPH, and the CDC to be a high risk area.

2. Regarding the statement of Dr. MacLean in 2009 that "he does not feel that construction activities are necessarily the cause of VF outbreaks", staff notes that this was not a firm scientific fact at the time nor did Dr. McLean cite any study or evidence. Indeed, this quote was taken out of context by the petitioner and Dr. McLean's full views were that he was only speculating on causes at the time (SA page 4.14-18). Since 2009, additional evidence has surfaced which provides a better correlation of VF outbreaks to construction activities on desert lands (SA

pages 4.14-15). Therefore, staff's position that construction and grading of desert land in Riverside County and other southwest areas of the United States presents a risk to workers of being exposed to *C.immitis* and contracting VF is supported by recent events in California and by the CDPH and the CDC. Furthermore, despite the lowered amount of grading required for the modified BSPP site, it will still require a massive amount of desert soil disturbance and thus the risk of producing airborne spores of *C.immitis* would be significant.

3. Regarding the need for PM10 monitoring, this requirement is not based on a South Coast Air Quality Management District (SCAQMD) rule as alleged by the petitioner but rather on a dust control rule of the former Kern County APCD (Rule 402 of the Kern County Air Pollution Control District as amended Nov. 3, 2004). (However, it is true that the SCAQMD has a similar PM10 monitoring requirement.) Regarding the petitioner's claim that this monitoring may not provide useful information in real-time, staff notes that real-time PM10 monitors are available, are reasonably accurate, and can be quite useful for the purpose of evaluating dust suppression methods. Furthermore, the time-delay (a matter of hours or a day or two) in collecting and analyzing PM10 airborne concentrations by current readily available standard particulate samplers would not render the results of monitoring useless. Rather, it would allow the petitioner to fine-tune their dust control methods if found to be inadequate by the monitoring. As the proposed Condition states, the project owner would be required to prepare an enhanced Dust control Plan and provide this plan to the CPM for approval. This gives the project owner an opportunity to not only describe the design and implementation of the plan (including equipment to be used, locations of the samplers, and the duration & frequency of sampling) but to state how they will react to exceedances found by the monitoring. Rather than prescribe such details in a specification-type condition, staff finds it more useful to suggest a performance-type condition to allow the project owner greater flexibility in designing the program. In summary, staff finds that PM10 monitoring in real-time or with a short delay (hours to a day or two) is possible and will be useful and notes that this same requirement proposed by staff for another energy project is supported by Region 9 Environmental Protection Agency and Cal-OSHA.

The petitioner also objects to certain language within proposed new Condition **WORKER SAFETY-10** and suggests removal of the reporting requirements for all cases of heat illness including stroke, stress, exhaustion, or prostration and to instead limit the reporting to cases of only heat stroke. The petitioner stated that limiting the reporting to heat stroke cases only would be a more reasonable requirement. Staff disagrees for the following reasons:

1. Heat illness is a term used in the Cal-OSHA regulation (8 CCR 3395) and is defined as "a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke". Heat stroke is the most serious heat related disorder and occurs when the body's temperature regulation fails and is thus a life-threatening emergency. Reporting only the most serious cases of heat illness to

the CPM will not provide Energy Commission staff with the information it needs to determine if a project owner's heat illness program is adequate to protect workers. This Cal-OSHA regulation requires employers to institute an effective program to protect workers from all forms of heat illness, not just the most serious type. Indeed, the reporting of heat stroke cases could be an indication that the project owner's program has already failed to protect workers and thus would not serve at all as an early warning indicator.

2. It would not be onerous to report all incidences of heat illness to the CPM within 24 hours. Staff will accept an e-mail or a phone call.
3. Not having data on all heat illness cases would deprive staff of the data necessary to determine the effectiveness of conditions of certification and heat illness prevention programs.

GENERAL CONDITIONS
Testimony of Mary Dyas

I am the author of the General Conditions section of the Staff Assessment. I have reviewed the comments and suggested edits to the Conditions of Certification by the project applicant. I also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe Solar Thermal project. After considering the information in my Staff Assessment and the suggested edits I make the following changes from the language in the Staff Assessment:

COM-4: **Pre-Construction Matrix and Tasks Prior to Start of Construction ~~(COMPLIANCE-4)~~**

Prior to start of construction, the project owner will submit to the CPM a compliance matrix including only those conditions that must be fulfilled before the start of construction. The matrix will be included with the project owner's first compliance submittal or prior to the first pre-construction meeting, whichever comes first, and will be submitted in a format similar to the description below.

Site mobilization and construction activities will not start until all of the following occur: submittal of the pre-construction matrix and compliance verifications pertaining to all pre-construction conditions of certification, and the CPM has issued an authorization to construct letter to the project owner. The deadlines for submitting various compliance verifications to the CPM allow sufficient staff time to review and comment on, and if necessary, allow the project owner to revise the submittal in a timely manner. These procedures help ensure that project construction proceeds according to schedule. Failure to submit required compliance documents by the specified deadlines may result in delayed authorizations to commence various stages of the project.

If the project owner anticipates site mobilization immediately following project certification, it may be necessary for the project owner to file compliance submittals prior to project certification. In these instances, compliance verifications can be submitted in advance of the required deadlines and the anticipated authorizations to start construction. The project owner must understand that submitting compliance verifications prior to these authorizations is at the owner's own risk. Any approval by Energy Commission staff prior to project certification is subject to change based upon the Commission Decision, and early staff

compliance approvals do not imply that the Energy Commission will certify the project for actual construction and operation.

Construction may commence subsequent to CPM issuance of a letter authorizing the owner to proceed. The CPM may issue limited notices to proceed to allow one or more portions of construction to commence. A limited notice to proceed, if issued, will specify what activities (such as temporary/permanent tortoise fencing, wells, etc) can occur and what specific conditions must be met to commence the activities identified in the notice.

The additional language added to COM-4 attempts to address concerns the Applicant had regarding the ability to install tortoise fencing without triggering other non-related obligations that occur when construction starts.

The recommended updates to the compliance conditions are not specifically related to the project changes but reflect a recent effort to improve the clarity and effectiveness of the conditions. After reviewing the compliance conditions for many projects and considering actual implementation experience, staff set out to make the conditions clearer and easier to follow for the facility owner and staff. Staff is recommending these changes for both new applications for certification and Committee-assigned amendments moving forward.

PROGRAMMATIC AGREEMENT
AMONG THE
BUREAU OF LAND MANAGEMENT-CALIFORNIA,
THE CALIFORNIA ENERGY COMMISSION,
PALO VERDE SOLAR 1 LLC, AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE BLYTHE SOLAR POWER PROJECT- RIVERSIDE COUNTY, CALIFORNIA

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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 Palo Verde Solar I, LLC - Solar Millennium Blythe 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 Palo Verde Solar I, LLC - Solar Millennium Blythe Project (Application for Certification 09-AFC-6). 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 Palo Verde Solar I, LLC - Solar Millennium Blythe 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,
PALO VERDE SOLAR 1 LLC, AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE BLYTHE SOLAR POWER PROJECT- RIVERSIDE COUNTY, CALIFORNIA

WHEREAS, Palo Verde Solar I, 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 Blythe Solar Power Project), including construction of four independent 250-megawatt (MW) units (Units #1, #2, #3, and #4), a 230 kilovolt (kV) transmission line, a natural gas pipeline, paved arterial roads and parking areas, unpaved perimeter roads, and unpaved access routes, 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 Palo Verde Solar I, LLC (PVSI), 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 March 11, 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 *Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment, Blythe Solar Power Project (2010)* and the Energy Commission has prepared the *Supplemental Staff Assessment Blythe Solar Power Project, Application for Certification (09-AFC-6) Riverside 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 Morongo Band of Mission Indians, the Cocopah Indian Tribe, the Fort Yuma Quechan Indian Tribe, the San Manuel Band of Mission Indians, the Torres-Martinez Desert Cahuilla Indians, the Fort Mojave Indian Tribe, the Twenty-Nine Palms Band of Mission Indians, the Agua Caliente Band of Cahuilla Indians, the Augustine Band of Mission Indians, the Cabazon Band of Mission Indians, the Chemehuevi Indian Tribe, and the Colorado River Indian Tribes (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 I 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 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 geo-morphological 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 9,400 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 *Draft Final Class III Survey Report, for the Proposed Blythe Solar Power Project Riverside County, California*, prepared by AECOM, January 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) ***Tribes.*** The federally recognized Indian Tribes that BLM is consulting with on this Project.

n) ***Tribal organizations.*** The non Federally recognized Indian tribes and Native American organizations 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 9,400 acres of public lands. The area is generally bounded by Interstate 10 on the south, An electrical transmission line corridor runs north-south, two miles to the east, the McCoy Mountains lie to the west, and McCoy Wash lies to the north. 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 50-foot wide ROW for a new four-inch diameter natural gas line, extending for approximately 5 miles to connect the Blythe project to an existing Southern California Gas (SCG) pipeline situated south of I-10. The pipeline will be buried with a minimum of three feet of cover depending on location. The gas line route extends from an existing SCG line 1,800 feet south of I-10. A survey corridor for cultural resources for this linear element was established as 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.

(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 120-feet wide and 10 miles long and extends from the Project area to the Southern California Edison (SCE) Colorado River 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 Eastern Information Center (EIC), 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) The Desert Training Center California-Arizona Maneuver Area (DTC/C-AMA).
(b) Cultural resources in the Mule Mountains Area of Critical Environmental Concern (ACEC).
(c) The Bradshaw Trail and numerous, wide-spread, previously recorded, prehistoric trail segments.
(d) 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) The Bradshaw Trail

(b) Specific areas of concern or cultural resources have been identified both south and west of the project location and include:

(i) Black Rock (a geological feature)
(ii) Mule Mountains ACEC

(iii) McCoy Spring

(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) Blythe Airport
(ii) Interstate Highway 10.
(iii)The Atchison, Topeka and Santa Fe Railroad
(iv)A segment of the Parker Headgate Rock-Blythe 161KV transmission line

(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 (AECOM January 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-660-66.24 09-10, Fieldwork Authorization CA-660-66.24 09-12, Fieldwork Authorization CA-660-66.24 10-02, and Fieldwork Authorization CA-660-66.24 10-04, and Energy Commission transaction number Data Requests Set 1, Part #1-260, Docket number 09-AFC-6.

   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 agreement 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, 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 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 though 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 or other phases 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 1 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 parabolic solar trough assemblies.

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: _____ DATE: OCT 0 5 2010
John Kalish
Manager, Palm Springs-South Coast Field Office

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

BY: _____ DATE: 7 OCT 2010
Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

INVITED SIGNATORY PARTIES

California Energy Commission
Palo Verde Solar I, LLC

Invited Signatory

CALIFORNIA ENERGY COMMISSION

BY: _____ DATE: _____

TITLE: _____

Invited Signatory

PALO VERDE SOLAR I, LLC

BY: J. Fickett DATE: Oct. 18, 2010

TITLE: CEO

CONCURRING PARTIES

MORONGO BAND OF MISSION INDIANS
COCOPAH INDIAN TRIBE
FORT YUMA QUECHAN INDIAN TRIBE
SAN MANUEL BAND OF MISSION INDIANS
TORRES-MARTINEZ DESERT CAHUILLA INDIANS
FORT MOJAVE INDIAN TRIBE
TWENTYNINE PALMS BAND OF MISSION INDIANS
AGUA CALIENTE BAND OF CAHUILLA INDIANS
AUGUSTINE BAND OF MISSION INDIANS
CABAZON BAND OF MISSION INDIANS
CHEMEHUEVI INDIAN TRIBE
COLORADO RIVER INDIAN TRIBES

Concurring Party

MORONGO BAND OF MISSION INDIANS

BY: _____ DATE: _____

TITLE: _____

Concurring Party

COCOPAH INDIAN TRIBE

BY: _____ DATE: _____

TITLE: _____

Concurring Party

FORT YUMA QUECHAN INDIAN TRIBE

BY: _____ DATE: _____

TITLE: _____

Concurring Party

SAN MANUEL BAND OF MISSION INDIANS

BY: _____ DATE: _____

TITLE: _____

Concurring Party

TORRES-MARTINEZ DESERT CAHUILLA INDIANS

BY: _____ DATE: _____

TITLE: _____

Concurring Party

FORT MOJAVE INDIAN TRIBE

BY: _____ DATE: _____

TITLE: _____

Concurring Party

TWENTYNINE PALMS BAND OF MISSION INDIANS

BY: _____ DATE: _____

TITLE: _____

Concurring Party

AGUA CALIENTE BAND OF CAHUILLA INDIANS

BY: Phil Gon-Tum DATE: 11/3/10

TITLE: Director of Historic Preservation / THPO

Concurring Party

AUGUSTINE BAND OF MISSION INDIANS

BY: _____ DATE: _____

TITLE: _____

Concurring Party

CABAZON BAND OF MISSION INDIANS

BY: _____ DATE: _____

TITLE: _____

Concurring Party

CHEMEHUEVI INDIAN TRIBE

BY: _____ DATE: _____

TITLE: _____

Concurring Party

COLORADO RIVER INDIAN TRIBES

BY: Jeldred Snow DATE: 11/01/11

TITLE: TRIBAL CHAIRMAN

RECEIVED
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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
Early Twentieth Century Mining Sites
Surveying Monuments
Historic Refuse Deposits
Pebble and Cobble Concentrations
Transportation and Trail Segments

Unique Archaeological Resources
Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA)

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 K.

(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 parabolic solar trough assemblies 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) Desert Training Center/California-Arizona Maneuver Area (DTC/C-AMA)

(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 Blythe Solar Power Project is a proposed solar energy power plant with 1,000 megawatts (MW) of nominal capacity comprised of four independent 250MW units (Units #1, #2, #3, and #4). The proposed project disturbance area is approximately 7,025 acres on land administered by the Bureau of Land Management in Riverside County, California, approximately eight miles west of the town of Blythe, two miles north of I-10. The units would be developed in phases, with construction scheduled to begin in late 2010 on the first unit, which would come on line in mid-2013.

The proposed Blythe Solar Power Project includes the following components:

a) A solar thermal power plant facility.

b) Major Components Overview:
   - Unit #1 (northeast) Solar Field and Power Block;
   - Unit #2 (northwest) Solar Field and Power Block;
   - Unit #3 (southwest) Solar Field and Power Block;
   - Unit #4 (southeast) Solar Field and Power Block;
   - Access road;
   - Office and parking;
   - Land Treatment Unit (LTU) for bioremediation/land farming of HTF-contaminated soil;
   - Warehouse/maintenance building and lay-down area;
   - Onsite transmission facilities, including central internal switchyard;
   - Natural gas pipeline;
   - Telecommunications lines;
   - Evaporation ponds;
   - Fencing (Wind, Security and Desert Tortoise);
   - Dry wash rerouting; and
   - Groundwater wells used for water supply.

c) Project Details:
   i) Solar Fields: The proposed project would be constructed in 250 MW units using solar thermal parabolic trough technology. With this technology, arrays of parabolic mirrors collect heat energy from the sun and refocus the radiation onto a receiver tube located at the focal point of the parabola. A heat transfer fluid (HTF) is heated to a high temperature (approximately 750 degrees Fahrenheit [°F]) as it circulates through the receiver tubes. The heated HTF is then piped through a series of heat exchangers where it releases its stored heat to generate high-pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced.
   ii) Power Blocks: Each power block unit would have its own solar field, composed of piping loops arranged in parallel groups, and its own power block, centrally located within the solar field. Each power block would have its own HTF pumping and freeze-protection system, solar steam generator, steam turbine generator, air-cooled

condenser for cooling, transmission lines and related electrical system, and auxiliary equipment (e.g., water treatment system, emergency generators, evaporation ponds).

iii) Roads: Access to the Blythe project site would be via a new road heading north from the Interstate 10 frontage road. This road would be accessed from an improved section of Black Rock Road along I-10, from the plant access road to the Airport/Mesa Drive exit. Only a small portion of the overall project site would be paved, primarily the site access road, the service roads to the power blocks, and portions of the power blocks (paved parking lot and roads encircling the STG and SSG areas). The remaining portions of each power block would be gravel surfaced. In total, each power block area would be approximately 18.4 acres each, with approximately six acres of paved area. The solar fields would remain unpaved and without a gravel surface in order to prevent rock damage from mirror wash vehicle traffic; an approved dust suppression coating would be used on the dirt roadways within and around the solar fields. Roads and parking areas located within the power block areas and adjacent to the administration building and warehouses would be paved with asphalt.

iv) Fencing and Security: The project solar fields and support facilities' perimeter would be secured with a combination of chain link and wind fencing. Chain link metal fabric security fencing consists of eight-foot tall fencing with one-foot barbed wire or razor wire on top along the north and south sides of the facilities. Thirty-foot tall wind fencing, comprised of A-frames and wire mesh, would be installed along the east and west sides of each solar field. Desert Tortoise exclusion fencing would be included. Controlled access gates would be located at the site entrance. As discussed below, the drainage channels would be outside the plant and the security fencing but still within the project ROW.

v) Drainage and Earthwork: The existing topographic conditions of the project site show an average slope of approximately one foot in 67 feet (1.50%) toward the east on the west side of the site and approximately one foot in 200 feet (0.50%) toward the southeast on the east side of the site. The project site lies in the Palo Verde Mesa east of the McCoy Mountains. The general storm water flow pattern is from the higher elevations in the mountains located three miles west of the site to the lower elevations in the McCoy Wash to the east of the site.

Drainage will be constructed in two phases: Phase One accommodates the necessary drainage for the construction of Units 1 & 2, and Phase Two the drainage plan for the entire four unit facility. In Phase One, two of the five major channels will need to be built for Units 1 and 2: the entire length of the North Channel plus diffuser, and the entire length of the Central channel plus diffuser. Only the portion of the West channel that bounds the southwest corner of Unit 2 will need to be constructed; the remainder of the West channel will not be needed until Units 3 and 4 are built. Phase Two will implement the fully constructed drainage plan for the entire facility, which was previously submitted to Staff.

vi) Natural Gas Pipeline: A new four-inch diameter, 9.8-mile long natural gas pipeline would be constructed to connect the Blythe project to an existing SCG pipeline situated south of I-10. Approximately eight miles would be within the plant site boundary and two miles outside the plant site boundary. The line would be buried with a minimum three feet of cover depending on location. The gas line route takes

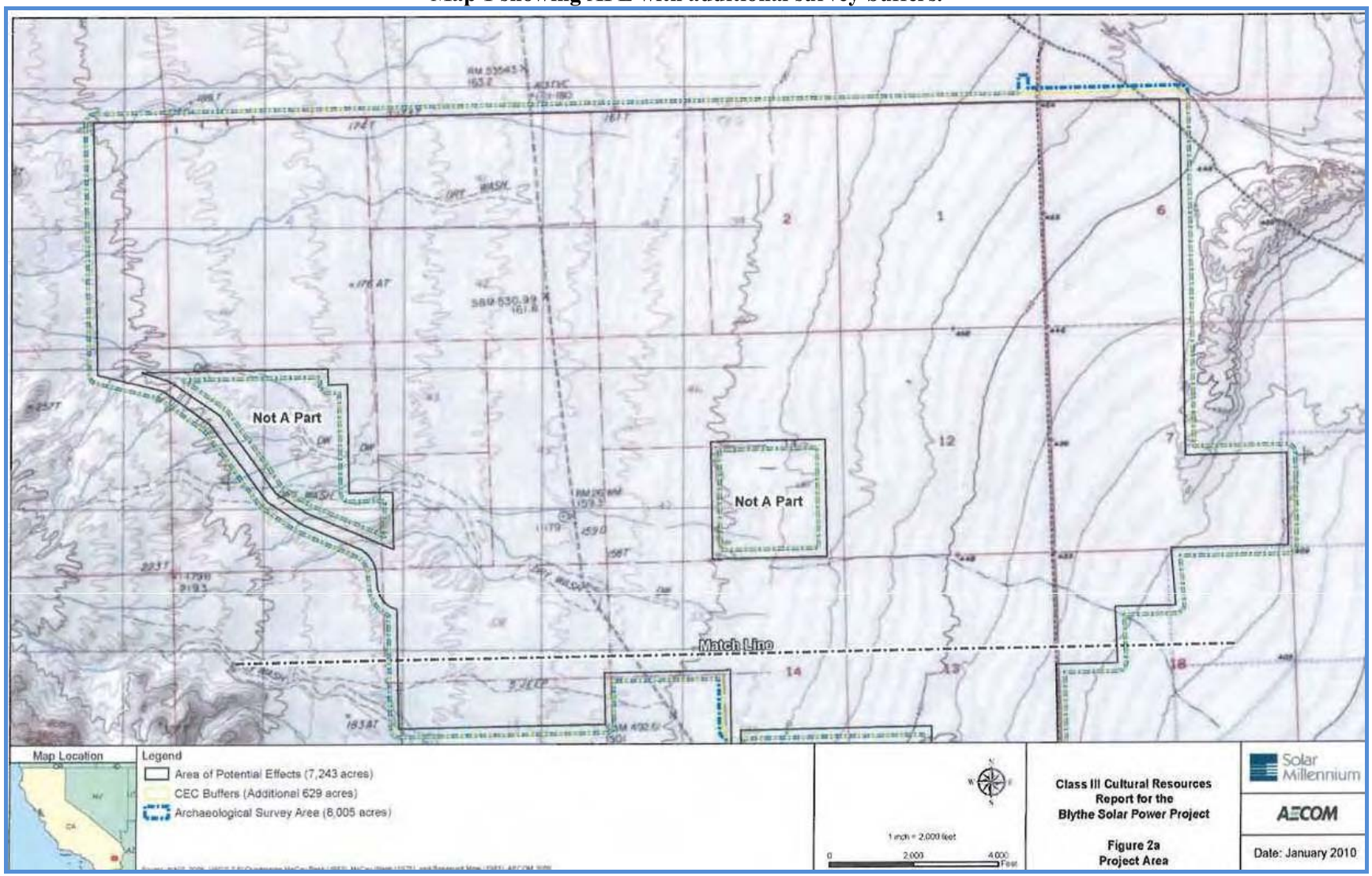
off from an existing SCG line 1,800 feet south of I-10. The alignment of the pipeline is directly north to the project site.

vii) Transmission System: The BSPP facility would be connected to the SCE transmission system at the new Colorado River substation planned by SCE approximately five miles southwest of the Blythe project site. The proposed generator-tie line would consist of a bundled double circuit 230 kV line.

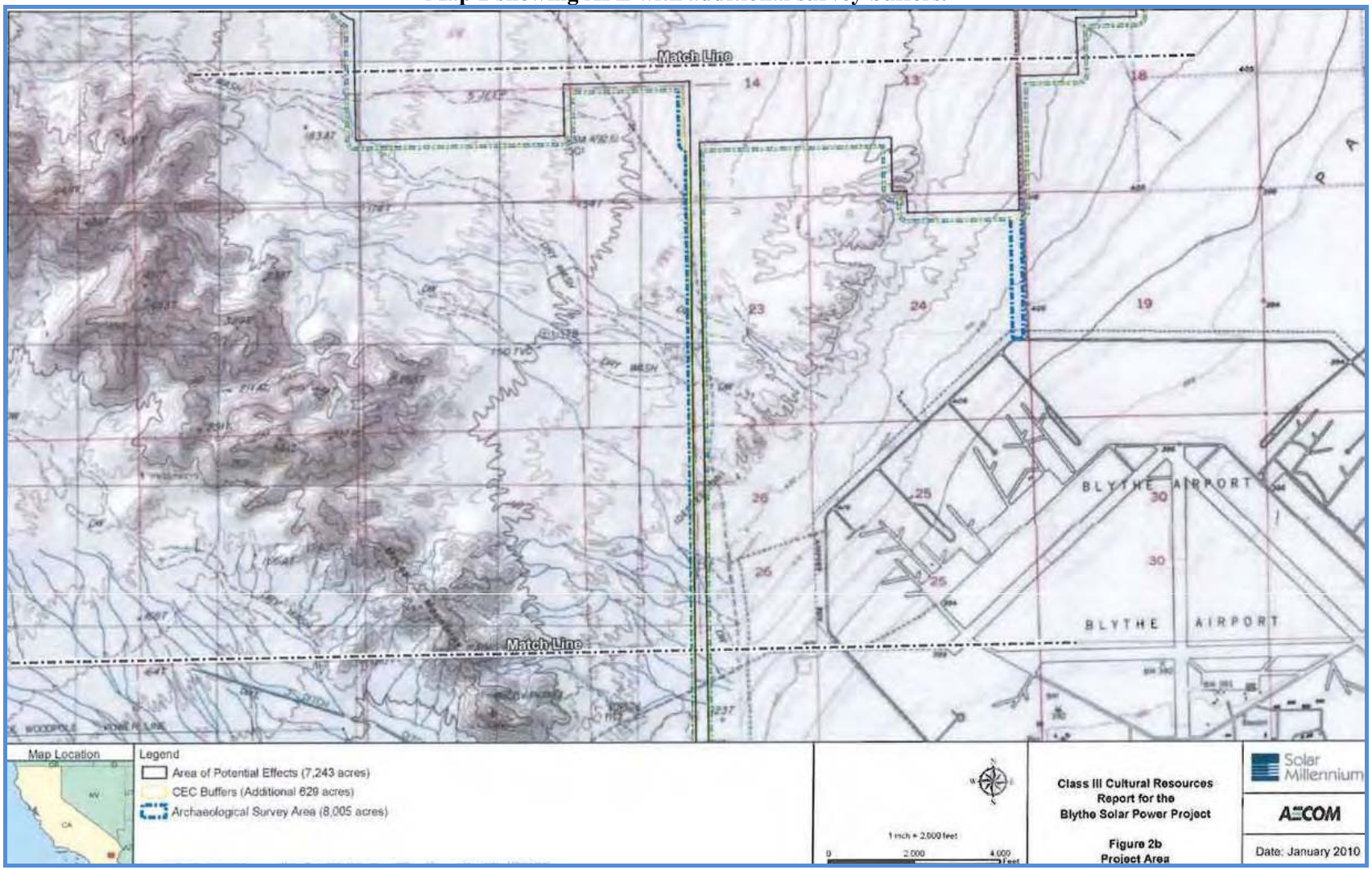
APPENDIX E: PROJECT MAPS AND ILLUSTRATIONS

1. Map showing Area of Potential Effect
2. Map showing Area of Potential Effect
3. Map showing Area of Potential Effect
4. Illustration of the configuration and layout of proposed project and components
5. Illustration of the Power Block Arrangement.
6. Illustrations of Solar Trough Assemblies
7. Rendition of view north from I-10 towards Big Maria Mountains

Map 1 showing APE with additional survey buffers.



Map 2 showing APE with additional survey buffers.



Map 3 showing APE with additional survey buffers.

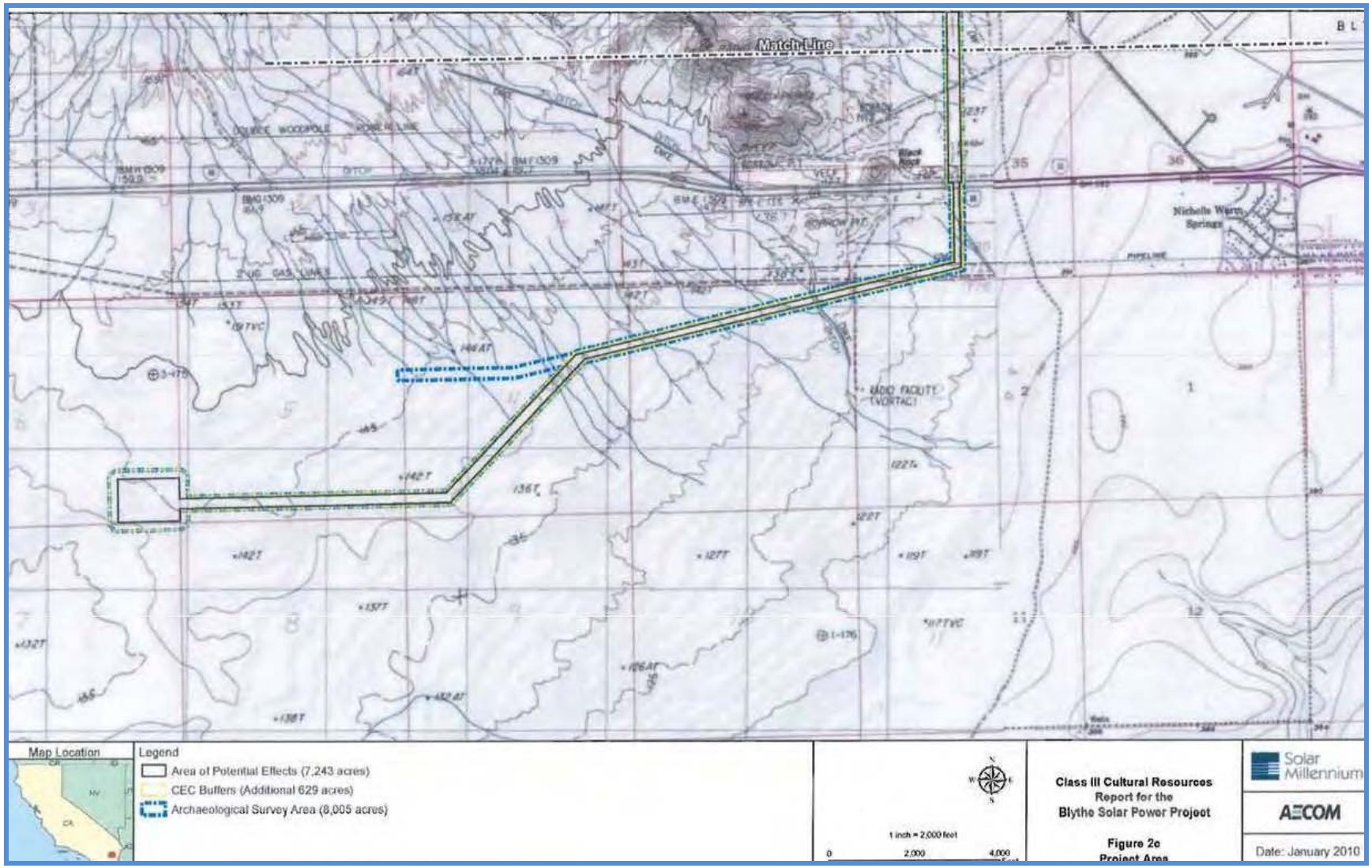


Illustration of the configuration and layout of proposed project and components.

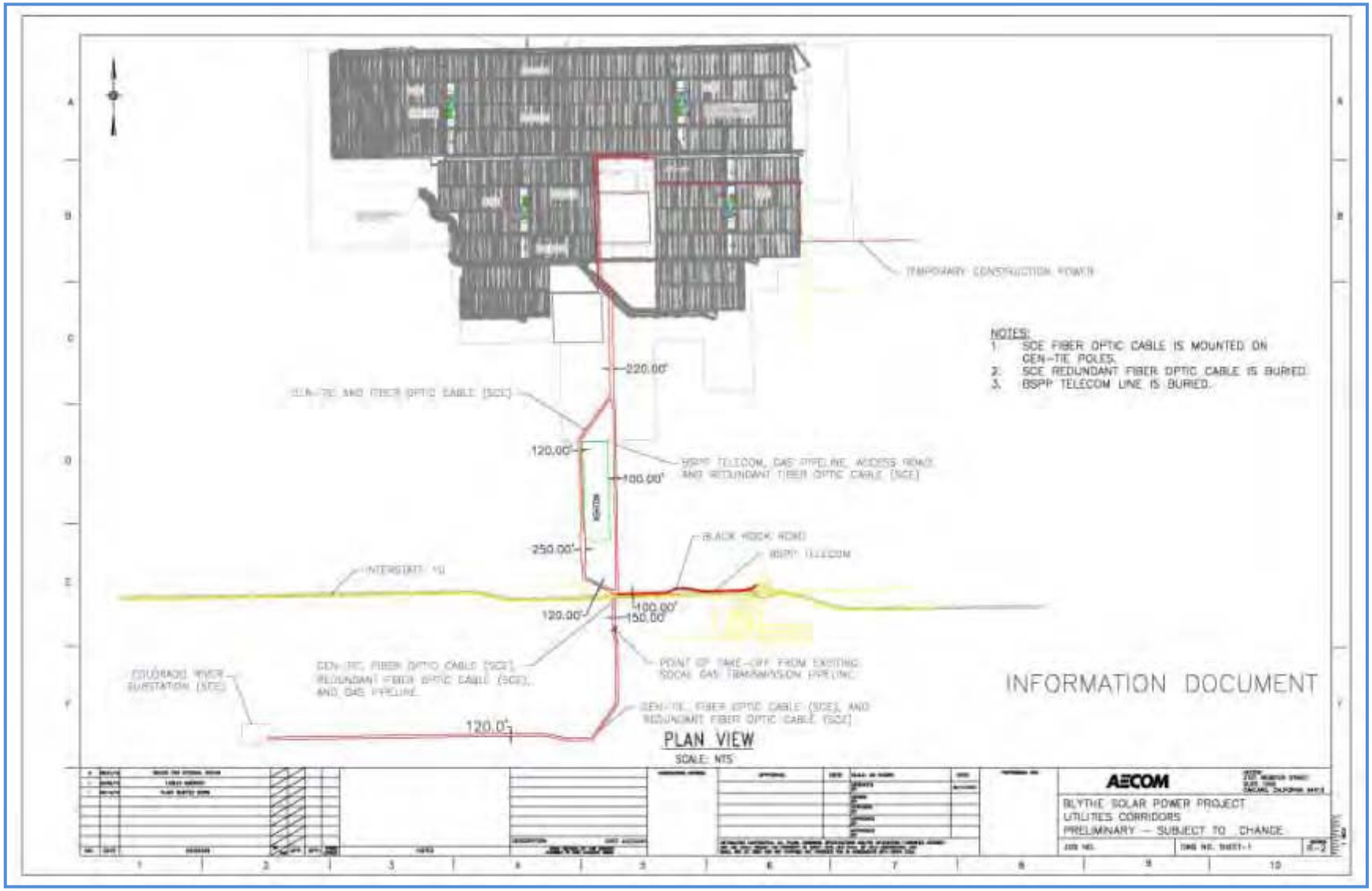
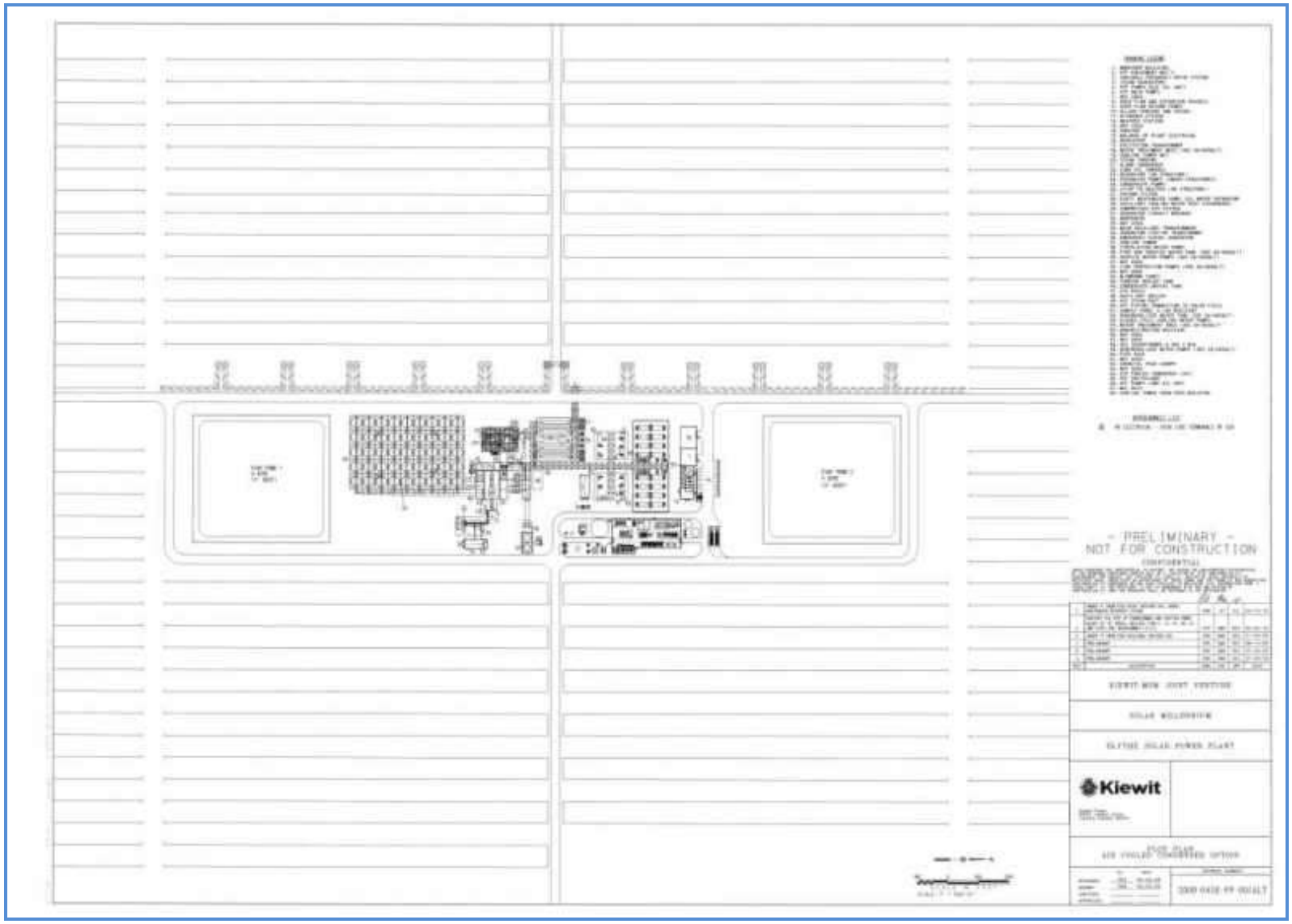
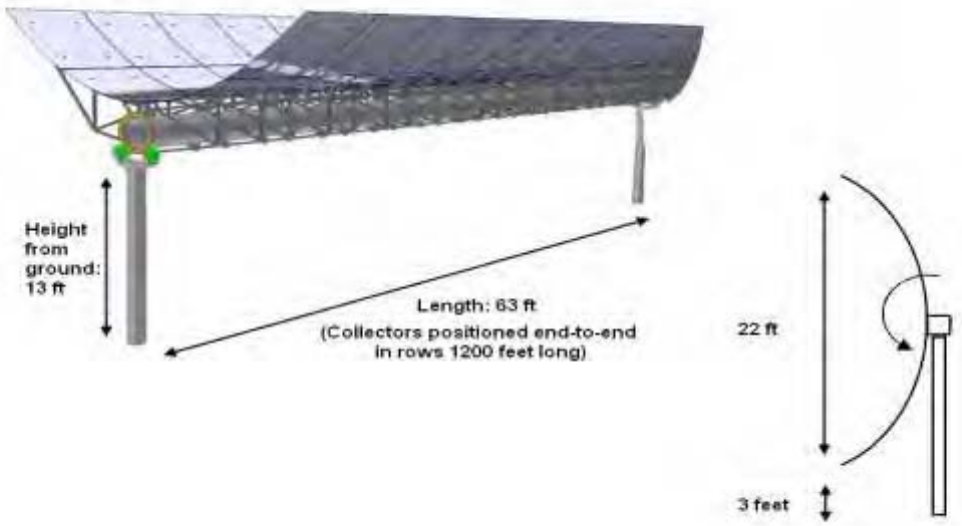


Illustration of the Power Block Arrangement



1

TYPICAL SOLAR TROUGH ASSEMBLY



Completed Solar Trough Assembly

Illustrations of Solar Trough Assemblies.

Rendition of view north from I-10 towards Big Maria Mountains

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.

The Applicant has retained AECOM 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. AECOM is authorized to conduct cultural resources investigations on lands managed by the BLM under Cultural Resources Use Permits No. CA-06-20 and CA-09-31 issued by the BLM California State Office. AECOM is authorized to conduct specific field investigations for the Solar Millennium Blythe Solar power Project under BLM Fieldwork Authorization CA-660FA#66.24 09-12 and Fieldwork Authorization CA- CA-660FA#66.24 10-02.

AECOM 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 8,005 acres of pedestrian survey to identify cultural resources within the APE has been completed. The ROW that BLM would issue encompasses approximately 7,243 acres of land, including the proposed 230-kV substation, the solar energy power plant, the Main Services Complex and associated electric and utility services, the sanitary system, access and entry roads, and corridors for the electric transmission line and the natural gas supply pipeline.

A draft cultural resources report (*CULTURAL RESOURCES CLASS III SURVEY DRAFT REPORT FOR THE PROPOSED BLYTHE SOLAR POWER PROJECT RIVERSIDE COUNTY, CALIFORNIA,* prepared by AECOM, January 2010) has been submitted by the Applicant that presents the results of identification efforts to the BLM and the Energy Commission. The BLM and the Energy Commission are 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 to determinations and findings the agency's will render pursuant to Section 106 of the NHPA.

AECOM conducted a records search at the Eastern Information Center (EIC) in Riverside, California. The EIC 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 26 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 Solar Millennium Blythe Project APE. The record search also identified approximately 71 previously recorded cultural resources within the APE and extended survey areas (Appendix F: Prior Investigations and Recorded Resources).

In 2009, AECOM conducted an intensive cultural resources survey (also referred to as a BLM Class III survey) of the APE. In 2010 additional fieldwork took place over the course of a number of separate field efforts as directed by the BLM and CEC. The additional field work was conducted to survey Gen-tie line and solar field alternatives. This work involved approximately 1,000 acres of additional survey and an additional records search with the Eastern Information Center. The EIC identified an additional three resources. The three previously recorded sites were located and an additional 12 new sites were discovered and recorded. Other project-related components included in the APE were also examined during the cultural resources investigations. These included the Colorado River Substation, which is an existing facility. The natural gas pipeline and transmission line corridors were also surveyed, both within the project site and off-site locations that are associated with the project.

The cultural resources survey of the proposed 1,000 MW solar energy plant APE identified 332 total cultural resource sites, of which 40 are prehistoric, 253 are historic and 39 are multi-component. One thousand five hundred fourteen isolate finds were also identified.

The ROW was withdrawn from the northeast of the current ROW, partly in the McCoy Wash, for environmental stewardship reasons to minimize the Project's impact on biological and cultural resources. The resources avoided by reducing the ROW to its current acreage are as follows:

Site No.	Age	Description
P-33-12902	Historic	Military isolates
P-33-12905	Historic	Glass bottle isolate
P-33-12908	Historic	Military isolate
P-33-12910	Historic	Military isolate
P-33-12911	Historic	Military isolates
CA-RIV-7179	Multi-component	Prehistoric ceramic scatter, historic tent platforms
CA-RIV-3418	Prehistoric	Quarry site
CA-RIV-3672	Prehistoric	Quarry site
P-33-12906	Prehistoric	Ceramic isolates
P-33-12907	Prehistoric	Cobble isolates, both pieces discarded
P-33-12909	Prehistoric	Cobble isolate
P-33-12912	Prehistoric	Ceramic scatter

To date, AECOM has surveyed 9,400 acres for the Blythe Solar Power Project.
A complete list of cultural resources that are located within the APE for direct effects is provided in Appendix H. A tabular summary of the results of cultural resources investigations follows:

Table 1: Cultural Resources Summary, Project Area (AECOM, 2010)

Project Component	Prehistoric	Historic	Multi-Component	Indeterminate	Total[1]	Isolated Finds
Plant Site	27	205	27	0	259	1237
Substation	0	2	0	0	2	3
Utility, Access Road, and T-Line Corridors	1	12	6	0	19	42
T-Line (Re-Routed Portion)	0	3	4	0	7	9
Out of Project or in CEC Buffer	12	31	2	0	45	223
Total	40	253	39	0	332	1514

[1]Note that Cultural Resource Summary Table total is not inclusive of the historic-period built environment properties

In addition, AECOM completed an intensive historic architecture survey to account for the properties that appeared to be older than 45 years within the historic architecture APE, which extends one-half mile from the proposed project site and one-half mile on either side of its aboveground linear facilities.

APPENDIX G: AGENCY FINDINGS AND DETERMINATIONS

The BLM has not rendered formal determinations of eligibility or findings of effect for the cultural resources that may be affected by this undertaking. It is the BLM's intent to render preliminary determinations of eligibility on all resources prior to the Record of Decision and prior to the release of the final EIS if feasible, and provide opportunity for consulting parties and the public to comment on the agency's determinations, prior to submitting final determinations to the State Historic Preservation Office (SHPO) for review and comment. Determinations that the BLM may render are based on cultural resources documentation and recommendations that are currently under review and have not necessarily been accepted or approved by the agency. For a few cultural resources, primarily archaeological sites whose values are primarily informational, additional information or testing may be required in order to render a final determination of eligibility.

A description of preliminary recommendations on the eligibility of cultural resources is provided in Appendix F: Results of Cultural Resources Investigations.

Effects to historic properties and the treatment of effects within the APE are generally summarized as follows. Specific treatments to resolve effects that are developed by the consulting parties to this Agreement would be stipulated in the Historic Property Treatment Plans that tier from this Agreement.

- Within the APE for direct physical effects for the 1,000 MW solar energy plant as proposed, there would be an adverse effect on all historic properties for which the significant values are informational and eligibility for the NRHP is limited to criterion D considerations. Opportunities to avoid significant values may exist along the linears, However the specific nature of the installation of the Solar parabolic trough, the industrial nature of the project and the intensity of the development would make long term management and protection of resources within the boundaries of the solar energy plant impractical and difficult to implement. The recommended treatment measures would likely involve recovery of the informational values through archaeological excavation and study. Additional mitigation measures, such as educational materials or public interpretation, would also be considered in the HPTP for these historic properties.
    - Based on the results of the intensive cultural resources survey for the original 1,000 MW solar energy plant, the Applicant, in consultation with BLM and the Energy Commission, reconfigured the proposed project, layout by moving the western boundary of a portion of the northwestern corner of the solar field and expanding the eastern boundary further to the east thereby retaining the same acreage of the project, for the express purpose of avoiding direct physical impacts to biological resources and archaeological sites. -
    - Avoidance of direct physical effects is the preferred treatment measure for historic properties to which Indian Tribes attach sacred or religious significance, or for properties that have cultural significance as a traditional cultural property. The BLM would achieve this preferred treatment by conditioning the ROW grant to exclude those historic properties, or lands, from the project if feasible.

- For historic properties located in the APE for direct physical effects in linear corridors, such as the natural gas pipeline, the transmission line, and the main access road, the preferred treatment measure is avoidance through project redesign. The natural gas pipeline would be constructed in the transmission line corridor and should avoid direct physical effects to historic properties. However, the natural gas pipeline as well as the 230KV transmission line may be realigned and the ROW adjusted to avoid historic properties that may be located in the APE. If the property cannot be avoided, the BLM would minimize or mitigate the effects through implementation of the HPTP for significant values of the resource.
- Although the Bradshaw Trail corridor and associated prehistoric trails are in the vicinity of the project area, no cultural resources or other manifestation associated with the trail has yet been identified within the APE.
    - Mitigation measures developed for a potential Prehistoric Trails Cultural Landscape by the CEC in their COCs will be outlined in an HPTP developed specifically for the potential prehistoric trails landscape.
    - Use of aerial, LIDAR and satellite imaging technology to try to identify a primary path for the trail.
    - Where archaeological data recovery is used as a mitigation measure, the investigations should provide attention to identifying artifacts or faunal remains that may have been left behind by prehistoric peoples.
    - Coordination with mitigation measures developed in the FEIS and Energy Commission's Staff Assessment for effects to trails and viewsheds, which may include one-time preparation and installation of interpretive displays at the project site or other known trail sites outside the project area, the one-time development of visitor overlooks, or the one-time creation of audio/driving interpretive materials.

APPENDIX H: CULTURAL RESOURCES IDENTIFIED WITHIN THE APE

Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
N/A	53T	Prehistoric trail segment	Prehistoric	Unknown (out of APE)	Outside of APE
661	661	Rock alignment	Prehistoric	Unknown (out of APE)	Outside of APE
662	662	Intaglio	Prehistoric	Unknown (out of APE)	Outside of APE
880	880	Cleared area; lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
885	885	Cleared areas; lithic scatter; trail segment	Prehistoric	Unknown (out of APE)	Outside of APE
1135	1135	Lithic quarry	Prehistoric	Unknown (out of APE)	Outside of APE
1136	1136	Ceramic scatter	Prehistoric	Moderate to High	Plant Site
1464	1464	Trail segment	Prehistoric	Moderate	Plant Site
1481	1481	Ceramic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2790	2790	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2791	2791	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2792	2792	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2793	2793	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2794	2794	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE

Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
2795	2795	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2796	2796	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2844	2844	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2845	2845	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
2846	2846	Lithic quarry	Prehistoric	Moderate to High	Outside of APE
3417	3417	Lithic quarry	Prehistoric	Unknown (out of APE)	Outside of APE
3418	3418	Lithic quarry	Prehistoric	Unknown (out of APE)	Outside of APE
3419	3419	Lithic quarry	Prehistoric	Moderate to High	Plant Site and Utilities Corridor
3671	3671	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
3672	3672	Lithic quarry	Prehistoric	Unknown (out of APE)	Outside of APE
3673	3673	Trail segment with associated lithics	Prehistoric	Unknown (out of APE)	Outside of APE
N/A	3799	Temporary camp	Prehistoric	Unknown (out of APE)	Outside of APE
N/A	4568	Trail segment	Prehistoric	Unknown (out of APE)	Outside of APE
	CA-RIV-5674H	Historic Refuse	Historic	Low	Access Road
8032	5982H	Historic debris scatter	Historic	Unknown (out of APE)	Outside of APE
8135	6045	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
8136	6046	Lithic and ceramic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
8138	6048	Lithic quarry and scatter	Prehistoric	Unknown (out of APE)	Outside of APE
9669	7174H	Historic tent platforms, can scatters, and animal enclosures	Historic	Unknown (out of APE)	Outside of APE
9670		Historic can scatter; isolate – prehistoric biface	Historic and Prehistoric	Low	Outside of APE
9671	7175	Lithic scatter	Prehistoric	Low to moderate	CEC buffer
9672	7176	Ceramic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
9673	7177H	Historic can scatter	Historic	Unknown (out of APE)	Outside of APE
9675	7179	Ceramic scatter; historical tent platforms	Historic and Prehistoric	Unknown (out of APE)	Outside of APE
9676	7180H	Historic foundations and debris scatter		Unknown (out of APE)	Outside of APE
12912		Ceramic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
13310		Fire-affected rock features	Prehistoric	Unknown (out of APE)	Outside of APE
13617		Ceramic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
13672		Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
14150		Historic two-track road	Historic	Unknown (out of APE)	Outside of APE
14175		Ceramic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
17169	8934	Historic debris scatter	Historic	Unknown (out of APE)	Outside of APE
17170	8935	Historic debris scatter	Historic	Unknown (out of APE)	Outside of APE

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
17312	9005	Historic debris scatter	Historic	Unknown (out of APE)	Outside of APE
17315		Historic debris scatter	Historic	Unknown (out of APE)	Outside of APE
17317	9007	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
17318	9008	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
17319	9009	Historic debris scatter	Historic	Unknown (out of APE)	Outside of APE
17320	9010	Lithic scatter	Prehistoric	Unknown (out of APE)	Outside of APE
17323	9011	Historic debris scatter	Historic	Low	Substation
	SMB-H-002	Historical refuse scatter	Historic	Low	Substation
	SMB-H-107	Historical refuse scatter	Historic	Low	CEC buffer
	SMB-H-109	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-110	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-111	Historical refuse scatter and cairns	Historic	Low	CEC buffer
	SMB-H-113	Historical refuse scatter and cairns	Historic	Low	Plant Site
	SMB-H-114	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-115	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-116	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-118	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-119	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-120	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-121	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-122	Historical refuse scatter	Historic	Low	Plant Site

	SMB-H-123	Historical refuse scatter	Historic	Low	Plant Site

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-H-124	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-125	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-126	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-127	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-129	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-130	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-131	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-132	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-133	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-134	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-135	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-136	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-137	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-138	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-139	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-140	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-143	Historical refuse scatter and well	Historic	Moderate	Plant Site
	SMB-H-144	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-145	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-147	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-148	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-151	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-152	Historical refuse scatter	Historic	Low	Plant Site

	SMB-H-153	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-154	Historical refuse scatter	Historic	Low	Plant Site
Primary No.	**Site No.**	**Site Type**	**Cultural Context**	**Potential for Buried Deposits Based on Geomorphologic Information**	**Project Area Location**
	SMB-H-155	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-156	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-157	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-158	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-159	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-161	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-162	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-163	Fortified positions	Historic	Moderate	Plant Site
	SMB-H-164	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-165	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-166	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-167	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-168	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-169	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-170	Historical hearth	Historic	Low	Plant Site
	SMB-H-171	Historical refuse dump	Historic	Moderate	Plant Site
	SMB-H-173	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-175	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-176	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-177	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-178	Historical refuse dump	Historic	Moderate	Plant Site
	SMB-H-179	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-180	Historical refuse scatter	Historic	Low	Plant Site

	SMB-H-181	Historical refuse scatter	Historic	Low	Plant Site

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-H-182	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-183	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-184	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-185	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-186	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-189	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-190	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-191	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-192	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-193	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-194	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-195	Historical refuse scatter	Historic	Low	CEC buffer
	SMB-H-197	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-198	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-199	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-200	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-202	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-203	Historical cleared areas	Historic	Moderate	Plant Site
	SMB-H-204	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-205	Fortified positions	Historic	Moderate	Plant Site
	SMB-H-206	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-207	Fortified positions	Historic	Moderate	Plant Site
	SMB-H-208	Historical refuse scatter	Historic	Low	Plant Site

	SMB-H-209	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-210	Fortified positions	Historic	Moderate	Plant Site
Primary No.	**Site No.**	**Site Type**	**Cultural Context**	**Potential for Buried Deposits Based on Geomorphologic Information**	**Project Area Location**
	SMB-H-212	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-213	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-215	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-216	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-218	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-219	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-220	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-221	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-222	Historical hearth and rock features	Historic	Moderate	Plant Site
	SMB-H-223	Fortified positions	Historic	Moderate	Plant Site
	SMB-H-224	Historical refuse dump	Historic	Moderate	Plant Site
	SMB-H-226	Historical cairns and rock feature	Historic	Low	CEC buffer
	SMB-H-227	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-229	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-230	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-231	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-232	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-233	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-234	Historical refuse scatter and cairn	Historic	Low	Plant Site
	SMB-H-235	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-236	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-243	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-245	Historical refuse scatter and rock features	Historic	Low	Plant Site

	SMB-H-246	Historical refuse scatter	Historic	Low	Plant Site

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-H-247	Historical cleared areas	Historic	Moderate	Plant Site
	SMB-H-248	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-250	Historical cleared area	Historic	Moderate	Plant Site
	SMB-H-251	Historical cleared areas	Historic	Moderate	Plant Site
	SMB-H-253	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-254	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-255	Historical refuse scatter	Historic	Low	Plant Site & Utilities Corridor
	SMB-H-256	Historical refuse scatter	Historic	Low	Plant Site & Utilities Corridor
	SMB-H-257	Historical refuse scatter	Historic	Low	Utilities Corridor
	SMB-H-258	Historical refuse scatter	Historic	Low	Utilities Corridor
	SMB-H-259	Historical refuse scatter	Historic	Low	Plant Site & Utilities Corridor
	SMB-H-260	Historical refuse scatter	Historic	Low	Utilities Corridor
	SMB-H-263	Historical refuse scatter	Historic	Low	Utilities Corridor
	SMB-H-265	Historical refuse scatter	Historic	Low	Utilities Corridor
	SMB-H-266	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-267	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-268	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-269	Historical refuse dump	Historic	Moderate	Outside of the Project Area
	SMB-H-271	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-274	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-276	Historical refuse scatter	Historic	Low	Outside of the Project

					Area
	SMB-H-279	Historical refuse scatter	Historic	Low	Outside of the Project Area

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-H-282	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-283	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-284	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-285	Fortified position	Historic	Moderate	Plant Site
	SMB-H-286	Fortified position	Historic	Moderate	Plant Site
	SMB-H-287	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-288	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-290	Historical refuse scatter	Historic	Low	Plant Site & Utilities Corridor
	SMB-H-291	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-401	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-402	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-403	Historical refuse dump	Historic	Moderate	Plant Site
	SMB-H-404	Historical ranch	Historic	Moderate	Plant Site
	SMB-H-406	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-407	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-408	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-409	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-411	Historical cleared area	Historic	Moderate	Plant Site
	SMB-H-413	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-414	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-415	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-416	Historical refuse scatter and wooden ramp	Historic	Low	Plant Site
	SMB-H-417	Historical refuse scatter	Historic	Low	Plant Site

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-H-418	Historical refuse scatter and hearth	Historic	Low	Plant Site
	SMB-H-419	Historical refuse scatter and wooden ramp	Historic	Low	Plant Site
	SMB-H-420	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-423	Airplane crash site	Historic	Moderate	Plant Site
	SMB-H-424	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-426	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-427	Historical refuse dump	Historic	Moderate	Plant Site
	SMB-H-430	Historical refuse dump	Historic	Low	CEC buffer
	SMB-H-432	Historical structure foundation	Historic	Low	Plant Site
	SMB-H-439	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-442	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-444	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-447	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-450	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-452	Historical refuse scatter and hearth	Historic	Low	Outside of the Project Area
	SMB-H-460	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-505	Historical refuse scatter	Historic	Low	CEC buffer
	SMB-H-507	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-508	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-509	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-513	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-514	Historical refuse scatter and features	Historic	Moderate	Plant Site
	SMB-H-515	Historical refuse scatter	Historic	Low	Outside of the Project Area

	SMB-H-516	Historical refuse scatter	Historic	Low	Outside of the Project Area
Primary No.	**Site No.**	**Site Type**	**Cultural Context**	**Potential for Buried Deposits Based on Geomorphologic Information**	**Project Area Location**
	SMB-H-517	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-518	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-519	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-520	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-527	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-528	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-529	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-600	Historical road	Historic	Low	Plant Site & Utilities Corridor
	SMB-H-601	Historical road	Historic	Low	Plant Site
	SMB-H-701	Historical refuse scatter	Historic	Low	Outside of the Project Area
	SMB-H-702	Historical refuse scatter	Historic	Low	Utilities Corridor
	SMB-H-809	Historical refuse scatter	Historic	moderate	Plant Site
	SMB-H-813	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-815	Historical refuse scatter	Historic	Low to moderate	Plant Site
	SMB-H-817	Historical refuse scatter	Historic	Low	Plant Site & Transmission Line Corridor
	SMB-H-820	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-821	Historical refuse scatter and fortified positions	Historic	Low	Plant Site
	SMB-H-824	Historical refuse scatter	Historic	Low	Plant Site & Transmission Line Corridor
	SMB-H-827	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-828	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-829	Historical refuse scatter	Historic	Low to moderate	Plant Site

	SMB-H-830	Historical refuse scatter	Historic	Low	Plant Site

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-H-831	Historical refuse scatter	Historic	Low to moderate	Plant Site
	SMB-H-832	Historical refuse scatter and fortified positions	Historic	Low	Plant Site
	SMB-H-833	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-834	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-836	Historical refuse scatter and fortified positions	Historic	Low	Plant Site
	SMB-H-837	Historical refuse scatter and fortified positions	Historic	Low to moderate	Plant Site
	SMB-H-843	Historical refuse scatter	Historic		Plant Site
	SMB-H-847	Historical refuse scatter	Historic		CEC buffer
	SMB-H-849	Historical refuse scatter	Historic	Low to moderate	Plant Site
	SMB-M-850	Lithic scatter with historical refuse scatter	Historic and Prehistoric		Plant Site
	SMB-M-851	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low to moderate	Plant Site
	SMB-H-854/856	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-855	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-860	Historical refuse scatter	Historic	Low	Plant Site & Utilities Corridor
	SMB-H-861	Historical refuse scatter and fortified positions	Historic	Low to moderate	Plant Site & Utilities Corridor
	SMB-H-866	Historical refuse scatter and fortified positions	Historic	Low to moderate	Plant Site
	SMB-H-867	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-902	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-906	Historical refuse scatter	Historic	Low to moderate	Plant Site
	SMB-H-907	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-908	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-913	Historical refuse scatter and fortified positions	Historic	Low	Plant Site
	SMB-H-917	Historical refuse scatter	Historic	Low	CEC buffer

	SMB-H-918	Historical refuse scatter	Historic	Low	Plant Site
	SMB-H-919	Military campsite	Historic	Low	CEC buffer

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-H-926	Historical refuse scatter and fortified positions	Historic	Low to moderate	Plant Site
	SMB-H-927	Historical refuse scatter and fortified positions	Historic	Low to moderate	Plant Site
	SMB-H-928	Tent pad	Historic	Low	Plant Site
	SMB-H-929	Historical refuse scatter and fortified positions	Historic	Low to moderate	Plant Site
	SMB-H-935	Refuse Scatter	Historic	Low	Plant Site
	SMB-H-937	Refuse Scatter	Historic	Low to Moderate	Plant Site
	SMB-H-939	Fortified positions	Historic	Low	Plant Site
	SMB-H-940	Pit/Depression Features	Historic	Low	CEC buffer
	SMB-H-941	Refuse Scatter	Historic	Low	Plant Site
	SMB-H-943	Refuse Scatter	Historic	Low to Moderate	Plant Site
	SMB-H-CT-003	Lithic Reduction Locus/Historic Refuse Scatter	Historic	Low to Moderate	CEC buffer
	SMB-H-JR-101	Refuse Scatter	Historic	Low	CEC buffer
	SMB-H-LK-101	Refuse Scatter	Historic	Moderate	Transmission Line Corridor
	SMB-H-LK-105	Refuse Scatter	Historic	Low to Moderate	Transmission Line Corridor
	SMB-H-LK-106	Refuse Scatter	Historic	Low to Moderate	Transmission Line Corridor
	SMB-H-LK-201	Military Foxhole	Historic	Low to Moderate	CEC buffer
	SMB-H-LK-501	Military Foxholes	Historic	Low to Moderate	Plant Site
	SMB-H-MT-002	Lithic scatter with historical refuse scatter	Historic	Moderate	Utilities Corridor
	SMB-H-TC-102	Refuse Scatter	Historic	Low	Utilities Corridor
	SMB-H-TC-104	Refuse Scatter	Historic	Low	Utilities Corridor
	SMB-H-WG-101	Refuse Scatter	Historic	Low to Moderate	Utilities Corridor

	SMB-M-214	Thermal cobble feature and can	Historic and Prehistoric	Moderate	Plant Site
	SMB-M-261(262)	Historic refuse and lithic scatter	Historic and Prehistoric	Low	Utilities Corridor
	SMB-M-511	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Moderate	Outside of the Project Area
Primary No.	**Site No.**	**Site Type**	**Cultural Context**	**Potential for Buried Deposits Based on Geomorphologic Information**	**Project Area Location**
	SMB-M-512	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Outside of the Project Area
	SMB-M-522(525)	Historical refuse dump & lithic scatter	Historic and Prehistoric	Low	Utilities Corridor & Transmission Line Corridor
	SMB-M-805	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low to moderate	Plant Site
	SMB-M-806	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low to moderate	Plant Site & Transmission Line Corridor
	SMB-M-816	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-818	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-822	Groundstone with historical refuse	Historic and Prehistoric	Low to moderate	Plant Site
	SMB-M-823	Lithic scatter with fortified positions	Historic and Prehistoric	Low	Plant Site
	SMB-M-825	Historic hearth and lithic scatter	Historic and Prehistoric	Low	Transmission Line Corridor
	SMB-M-826	Historic hearth and lithic scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-857	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-859	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-864	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-903	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-904	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-909	Lithic scatter with military components	Historic and Prehistoric	Low	Plant Site
	SMB-M-910	Fortified positions, tent pad and sparse lithic scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-912	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site

	SMB-M-914	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-915	fortified positions and lithic scatter	Historic and Prehistoric	Low	Plant Site

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Primary No.	Site No.	Site Type	Cultural Context	Potential for Buried Deposits Based on Geomorphologic Information	Project Area Location
	SMB-M-916	fortified positions and lithic scatter	Historic and Prehistoric	Low to moderate	Plant Site
	SMB-M-924	fortified positions and lithic scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-925	fortified positions and lithic scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-930	fortified positions and lithic scatter	Historic and Prehistoric	Moderate	Plant Site
	SMB-M-934	Lithic scatter with military components	Historic and Prehistoric	Low	Plant Site
	SMB-M-936	fortified positions and lithic scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-CT-001	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Utilities Corridor
	SMB-M-JR-140	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Plant Site
	SMB-M-LK-102	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Transmission Line Corridor
	SMB-M-LK-103	Lithic scatter with historical refuse scatter	Historic and Prehistoric	Low	Transmission Line Corridor
	SMB-M-LK-104	fortified positions and lithic scatter	Historic and Prehistoric	Low	Transmission Line Corridor
	SMB-M-TC-101	historic refuse with sparse lithics and ceramics	Historic and Prehistoric	Low	Utilities Corridor
	SMB-M-TC-103	historic refuse with groundstone	Historic and Prehistoric	Low	Utilities Corridor
	SMB-M-WG-102	historic refuse with ceramics	Historic and Prehistoric	Low	Utilities Corridor
	SMB-P-160	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-228	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-237	Lithic scatter	Prehistoric	Low	Outside of the Project Area
	SMB-P-238	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-241	Lithic scatter and cairn	Prehistoric	Moderate to High	Plant Site
	SMB-P-242	Lithic scatter	Prehistoric	Low	Outside of the Project Area

	SMB-P-244	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-249	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-252	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-270	Lithic scatter and cairn	Prehistoric	Low	Outside of the Project Area
Primary No.	**Site No.**	**Site Type**	**Cultural Context**	**Potential for Buried Deposits Based on Geomorphologic Information**	**Project Area Location**
	SMB-P-272	Lithic scatter	Prehistoric	Moderate	Outside of the Project Area
	SMB-P-275	Lithic scatter	Prehistoric	Moderate	Outside of the Project Area
	SMB-P-410	Trail	Prehistoric	Low	Plant Site
	SMB-P-434	Thermal cobble features	Prehistoric	Moderate to High	Plant Site
	SMB-P-435	Thermal cobble features	Prehistoric	Low	Outside of the Project Area
	SMB-P-436	Thermal cobble features	Prehistoric	Moderate to High	Plant Site
	SMB-P-437	Thermal cobble feature	Prehistoric	Moderate to High	Plant Site
	SMB-P-438	Thermal cobble feature	Prehistoric	Moderate to High	Plant Site
	SMB-P-440	Thermal cobble feature	Prehistoric	Moderate to High	Plant Site
	SMB-P-441	Thermal cobble features	Prehistoric	Moderate to High	Plant Site
	SMB-P-445	Lithic scatter and thermal cobble feature	Prehistoric	Moderate to High	Utilities Corridor
	SMB-P-448	Thermal cobble feature	Prehistoric	Moderate to High	Outside of the Project Area
	SMB-P-453	Lithic scatter	Prehistoric	Moderate	Outside of the Project Area
	SMB-P-454	Thermal cobble feature and ceramic scatter	Prehistoric	Moderate to High	Outside of the Project Area
	SMB-P-530	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-531	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-532	Lithic scatter	Prehistoric	Moderate	Plant Site
	SMB-P-901	Lithic scatter	Prehistoric	Low	CEC buffer
	SMB-P-905	Lithic scatter	Prehistoric	Low to Moderate	Plant Site
	SMB-P-920	Lithic scatter	Prehistoric	Low	CEC buffer

	SMB-P-921	Lithic scatter	Prehistoric	Low	Plant Site
	SMB-P-922	Lithic scatter	Prehistoric	Low	Plant Site
	SMB-P-942	Lithic scatter	Prehistoric	Low to Moderate	Plant Site
Primary No.	**Site No.**	**Site Type**	**Cultural Context**	**Potential for Buried Deposits Based on Geomorphologic Information**	**Project Area Location**
	SMB-P-944	Lithic scatter	Prehistoric	Low	Plant Site
	SMB-P-946	Lithic scatter	Prehistoric	Low	Plant Site
	SMB-P-947	Lithic scatter	Prehistoric	Low to Moderate	Plant Site

APPENDIX I: DOCUMENTATION OF TRIBAL CONSULTATION

Originator	Date	time	from	to	location	medium	Subj.
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chwmn. Mary Resvaloso (Torres-Martinez DCI)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Timothy Williams (Ft. Mojave Tribal Council)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Darrell Mike, (29Palms BMI)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Richard Milanovich, (Agua Caliente BMI)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chprsn. Maryann Green (Augustine BMI)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn John James (Cabazon BMI)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Charles Wood, (Chemehuevi TC)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Eldred Enas, (Colorado River TC)		cert Ltr.	Initial consultation
	7/1/2009		J.Kalish, C.Dalu BLM PSSCFO	Pres. Michael Jackson, (Ft. Yuma TC)		cert Ltr.	Initial consultation
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Robert Martin (Morongo)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. James Ramos (San Manuel BMI)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chwmn Mary Resvaloso (Torres-Martines DCI)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Timothy Williams (Ft. Mojave Tribal Council)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Darrell Mike, (29Palms BMI)		cert Ltr.	Fed reg. NOI

Originator	Date	time	from	to	location	medium	Subj.
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Richard Milanovich, (Agua Caliente BMI)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chprsn. Maryann Green (Augustine BMI)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn John James (Cabazon BMI)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Charles Wood, (Chemehuevi TC)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Chmn. Eldred Enas, (Colorado River TC)		cert Ltr.	Fed reg. NOI
	11/23/2009		J.Kalish, C.Dalu BLM PSSCFO	Pres. Michael Jackson, (Ft. Yuma TC)		cert Ltr.	Fed reg. NOI
	1/25/10	8:00am	WAPA BLM CEC ESA		Blythe	meeting	Environ. Scoping Meeting and site visit
	2/3/10	10:00am	CEC	CEC	BLM palm Sprs.	meeting	SA/Deis Genesis
Quechan	2/10/10	10:00	Quechan/BLM	BLM	Winterhaven	meeting	Present project information (all proj's)
CEC	2/16/10	13:30	CEC/BLM	BLM	BLM P.S.	meeting	Genesis tele conf.
	2/16/10		Pres. Michael Jackson (Ft. Yuma Quechan)	John Kalish (PSSCFO)		letter	states concerns over time-frames of solar projects
	2/18/10	7:17	G.Kline, BLM	P.Pinon (circle)		e-mail	Kokopelli Site visit.
	2/18/10	13:59	G.Kline, BLM	P.Pinon (circle)		e-mail	Kokopelli Site visit.
	2/19/10	3:43	G.Kline BLM	Patti Pinion (Circle)		e-mail	Plan site visit Blythe (Kokopelli)
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Robert Martin (Morongo)		cert. letter	Intent to develop PA for Sect. 106 reqmt.
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. James Ramos (San Manuel BMI)		cert. letter	Intent to develop PA for Sect. 106 reqmt.
Originator	**Date**	**time**	**from**	**to**	**location**	**medium**	**Subj.**

	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chwmn Mary Resvaloso (Torres-Martines DCI)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Timothy Williams (Ft. Mojave Tribal Council)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Darrell Mike, (29Palms BMI)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Richard Milanovich, (Agua Caliente BMI)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Dir. Patricia Tuck THPO (Agua Caliente BMI)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chprsn. Maryann Green (Augustine BMI)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn John James (Cabazon BMI)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Charles Wood, (Chemehuevi TC)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chwmn Sherry Cordova (Cocopah TC)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Eldred Enas, (Colorado River TC)		cert. letter	
	2/19/10		J.Kalish, G.Kline BLM PSSCFO	Pres. Michael Jackson, (Ft. Yuma TC)		cert. letter	
	3/1/10	7:54	G.Kline BLM	Patti Pinion (Circle)		e-mail	Visit Kokopelli site (meeting place)
circle	3/2/10	10:00am	Circle	Patti Pinon, Alfredo Figueroa, John Kalish, G.Kline, et.al.	Blythe	meeting	Visit Kokopelli site (and others)
Originator	**Date**	**time**	**from**	**to**	**location**	**medium**	**Subj.**

	3/3/10	4:42	G.Kline, BLM	Patti Pinon, Circle		e-mail	Thanks for tour and hospitality at Kokopelli site visit
	3/10/10		Chmn. Charles Wood, (Chemehuevi)	John Kalish (PSSCFO)			
	3/11/2010	9:01	Nancy Brown (ACHP)	G. Kline, BLM		e-mail	Ltr dtd. 3/11/2010 - ACHP not participating in the PA
SCA	3/18/10	1:30pm	Agua Caliente	Patty Tuck	Riverside Convention Center	meeting	Discussed coming events, current issues
G.Kline	3/24/10	12:40	G.Kline, BLM	A.Brierty, San Man.		e-mail	CEC Public Workshop meeting notification
G.Kline	3/24/10	12:40	G.Kline, BLM	B. Nash, Ft.Yuma Quechan		e-mail	CEC Public Workshop meeting notification
G.Kline	3/24/10	12:40	G.Kline, BLM	A.Madrigal Sr.San Man		e-mail	CEC Public Workshop meeting notification
G.Kline	3/24/10	12:40	G.Kline, BLM	A.Madrigal Jr. 29Palms		e-mail	CEC Public Workshop meeting notification
G.Kline	3/24/10	12:40	G.Kline, BLM	S.Milanovich, Agua Caliente		e-mail	CEC Public Workshop meeting notification
G.Kline	3/24/10	12:40	G.Kline, BLM	L. Otero Ft. Mojave		e-mail	CEC Public Workshop meeting notification
G.Kline	3/24/10	12:40	G.Kline, BLM	P.Tuck, Agua Caliente		e-mail	CEC Public Workshop meeting notification
	3/25/2010	18:32	Ann Brierty, San Man.	G. Kline, BLM		e-mail	announcement of Tribal renewable energy symposium
	3/26/2010	13:39	G.Kline, BLM	Ann Brierty, San. Man.		e-mail	Req. seat at the Tribal Symposium on renewable energy
	3/26/2010	16:34	Ann Brierty, San Man.	G. Kline, BLM		e-mail	Confirmed attendance at planned Native American Tribes Symposium on renewable energy

Originator	Date	time	from	to	location	medium	Subj.
	3/29/2010	7:23	G.Kline BLM	Ann Brierty, San. Man.		e-mail	information on all solar projects
29 Palms	3/29/2010	9:22	A. Madrigal Jr., 29 Palms BMI	G. Kline, BLM		e-mail	Wishes to participate in PA development for the Blythe, Palen, and Genesis projects
Sol. Millenniu m	3/30/10	13:30-15:00	Alice Harron/Sol. Millennium	S.Weidlich, and A. Keller of AECOM; G. Kline, BLM; B. Nash-Chrabascz, W. Scott, P. Jose, Agua Caliente	Quechan Tribal Headquarters	meeting	Informational meeting on the technology and cultural resources for Blythe and Palen Projects.
G.Kline	4/2/10	14:24	G. Kline BLM	B. Nash, Ft. Yuma		e-mail	PA Kick-off and other solar issues
G.Kline	4/2/10	15:37	G.Kline BLM	S. Milanovich, Agua Caliente		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	P.Tuck Agua Caliente		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	A. Brierty, San Man. BMI		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	A.Madrigal Jr. 29 palms		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	A. Madrigal Sr. San Man		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	J.Ontiveros, Soboba		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	L.Otero Ft.Mojave		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	Manfred Scott Ft. Yuma		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	Colorado R. Indian Tribes		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/2/10	15:37	G.Kline BLM	Eldred Enas (CRIT Chair)		e-mail	Notification of the PA Kick-off meeting
G.Kline	4/5/10	8:18	G.Kline	Ann Brierty, San Man.		e-mail	PA Kick-off announcement meeting date established
G.Kline	4/5/10	8:18	G.Kline	M. Levias, Sr. Chemehuevi		e-mail	PA Kick-off announcement meeting date established

G.Kline	4/5/10	8:18	G.Kline	B. Nash, Ft. Yuma		e-mail	PA Kick-off announcement meeting date established
Originator	**Date**	**time**	**from**	**to**	**location**	**medium**	**Subj.**
G.Kline	4/5/10	8:18	G.Kline	A. Madrigal Sr., San.Man		e-mail	PA Kick-off announcement meeting date established
G.Kline	4/5/10	8:18	G.Kline	Linda Otero, Ft. Mojave		e-mail	PA Kick-off announcement meeting date established
G.Kline	4/5/10	8:18	G.Kline	P. Tuck, Agua Caliente		e-mail	PA Kick-off announcement meeting date established
G.Kline	4/5/10	12:45	G.Kline	A.Brierty San Man.		e-mail	more meeting details…
	4/5/10	12:45	G.Kline	A. Madrigal Sr. San Man.		e-mail	more meeting details…
	4/5/10	12:45	G.Kline	A. Madrigal Jr. 29 Palms		e-mail	more meeting details…
	4/5/10	12:45	G.Kline	J.Ontiveros, Soboba		e-mail	more meeting details…
	4/5/10	12:45	G.Kline	B.Nash Ft. Yuma Quechan		e-mail	more meeting details…
	4/5/10	12:45	G.Kline	M. Levias Chemehuevi		e-mail	more meeting details…
	4/5/10	12:45	G.Kline	S. Milanovich, Agua Caliente		e-mail	more meeting details…
	4/5/10	12:45	G.Kline	L.Otero Ft.Mojave		e-mail	more meeting details…
G.Kline	4/5/10	12:55	G.Kline	J.Ontiveros, Soboba		e-mail	answered questions re: PA Meeting
	4/5/10	13:45	S. Milanovich, Agua Caliente	G.Kline BLM		e-mail	Question re: Notification of the PA Kick-Off Meeting
	4/5/10	14:52	G.Kline BLM	S. Milanovich, Agua Caliente		e-mail	Answered questions about PA meeting content.
G.Kline	4/5/10	12:55	G.Kline	J.Ontiveros, Soboba		e-mail	answered questions re: PA Meeting

	4/5/10	13:45	S. Milanovich, Agua Caliente	G.Kline BLM		e-mail	Question re: Notification of the PA Kick-Off Meeting

Originator	Date	time	from	to	location	medium	Subj.
	4/5/10	14:52	G.Kline BLM	S. Milanovich, Agua Caliente		e-mail	Answered questions about PA meeting content.
G. Kline	4/6/10	9:50	G.Kline, BLM	Joe Ontiveros, Soboba		telephone	Will participate in PA, discussed meeting details for the April 23rd meeting.
G. Kline	4/6/10	9:50		Joe Ontiveros, Soboba		e-mail	Will participate in PA, discussed meeting details for the April 23rd meeting.
	4/6/10	10:01	G.Kline, BLM	B.Nash Ft. Yuma Quechan		e-mail	Rice WAPA Meeting
G. Kline	4/6/10	11:16	G.Kline BLM	Joe Ontiveros, Soboba		e-mail	Solar Project meetings sched. In the next few weeks…
G. Kline	4/6/10	13:11	G.Kline BLM	A. Brierty, San Man. BMI		e-mail	Solar proj. PA Kick-off announcement
G. Kline	4/6/10	13:11	G.Kline BLM	M. Levias Chemehuevi		e-mail	Solar proj. PA Kick-off announcement
G. Kline	4/6/10	13:11	G.Kline BLM	J.Ontiveros, Soboba		e-mail	Solar proj. PA Kick-off announcement
G. Kline	4/6/10	13:11	G.Kline BLM	B.Nash Ft. Yuma Quechan		e-mail	Solar proj. PA Kick-off announcement
G. Kline	4/6/10	13:11	G.Kline BLM	A. Madrigal Sr. San Man.		e-mail	Solar proj. PA Kick-off announcement
G. Kline	4/6/10	13:11	G.Kline BLM	A. Madrigal Jr. 29 Palms		e-mail	Solar proj. PA Kick-off announcement
G. Kline	4/6/10	13:11	G.Kline BLM	S. Milanovich, Agua Caliente		e-mail	Solar proj. PA Kick-off announcement

G. Kline	4/6/10	13:11	G.Kline BLM	L.Otero Ft.Mojave		e-mail	Solar proj. PA Kick-off announcement

Originator	Date	time	from	to	location	medium	Subj.
G. Kline	4/6/10	13:11	G.Kline BLM	P.Tuck, Agua Caliente		e-mail	Solar proj. PA Kick-off announcement
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Robert Martin (Morongo)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. James Ramos (San Manuel BMI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chwmn Mary Resvaloso (Torres-Martines DCI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Timothy Williams (Ft. Mojave Tribal Council)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Darrell Mike, (29Palms BMI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Richard Milanovich, (Agua Caliente BMI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Dir. Patricia Tuck THPO (Agua Caliente BMI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chprsn. Maryann Green (Augustine BMI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn John James (Cabazon BMI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Charles Wood, (Chemehuevi TC)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chwmn. Sherry Cordova (Cocopah TC)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Eldred Enas, (Colorado River TC)		cert. letter	Solar proj. PA Kick-off announcement letter

	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Pres. Michael Jackson, (Ft. Yuma TC)		cert. letter	Solar proj. PA Kick-off announcement letter

Originator	Date	time	from	to	location	medium	Subj.
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Chmn. Manuel Hamilon, (Ramona BMI)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Act. Chwmn. Rosemary Morillo (Soboba)		cert. letter	Solar proj. PA Kick-off announcement letter
	4/9/10		J.Kalish, G.Kline BLM PSSCFO	Rachael E. Koss (CURE)		cert. letter	Solar proj. PA Kick-off announcement letter
G. Kline	4/20/10	10:32	29 Palms BMI	Anthony Madrigal Jr.		telephone	Will attend Kick-off meeting
G. Kline	4/20/10	10:44	Agua Caliente BCI	Patti Tuck THPO		telephone	Will attend Kick-off meeting
Cabazon	4/20/10	12:55	Cabazon BMI	Judy Stapp		telephone	Returned Telephone Message, Will not attend PA Kick-off meeting
G. Kline	4/21/10	10:40	San Manuel BMI	Ann Brierty		telephone	Will not be able to attendPA Kick-off, but requests follow-up info.
G. Kline	4/21/10	11:20	Augustine BMI	David Saldivar		telephone	Will not be attending PA Kick-off Mtg.
G. Kline	4/21/10	11:31	Chemehuevi T. C.	Charles Wood (Office)		telephone	Will not be attending PA Kick-off Mtg.
G. Kline	4/21/10	2:44	CURE	Rachael Koss		telephone	Left Msg inq. Attendance at PA Kick-off.
San Man	4/22/10	4:23pm	San Manuel BMI	Anthony Madrigal		e-mail	Plans to Attend PA Mtg
G. Kline	4/23/10	9:30-16:00	BLM staff	A. Madrigal Jr, 29 Palms A. Madrigal Sr. San Manuel, P.Tuck, Agual Caliente	UCR Rivside	meeting	PA Kickoff meeting
CEC	4/26/10	13:15	G.Kline BLM	P.Tuck, Agua Caliente		e-mail	relay notice of meeting RE: SA/DEIS Workshop

CEC	4/26/10	13:15	G.Kline BLM	A. Brierty, San Man. BMI		e-mail	relay notice of meeting RE: SA/DEIS Workshop

Originator	Date	time	from	to	location	medium	Subj.
CEC	4/26/10	13:15	G.Kline BLM	M. Levias Chemehuevi		e-mail	relay notice of meeting RE: SA/DEIS Workshop
CEC	4/26/10	13:15	G.Kline BLM	B.Nash Ft. Yuma Quechan		e-mail	relay notice of meeting RE: SA/DEIS Workshop
CEC	4/26/10	13:15	G.Kline BLM	A. Madrigal Jr. 29 Palms		e-mail	relay notice of meeting RE: SA/DEIS Workshop
CEC	4/26/10	13:15	G.Kline BLM	A. Madrigal Sr. San Man.		e-mail	relay notice of meeting RE: SA/DEIS Workshop
CEC	4/26/10	13:15	G.Kline BLM	S. Milanovich, Agua Caliente		e-mail	relay notice of meeting RE: SA/DEIS Workshop
CEC	4/26/10	13:15	G.Kline BLM	J.Ontiveros, Soboba		e-mail	relay notice of meeting RE: SA/DEIS Workshop
CEC	4/26/10	13:15	G.Kline BLM	L.Otero Ft.Mojave		e-mail	relay notice of meeting RE: SA/DEIS Workshop
CEC	4/28/10	9:00 - 17:00	CEC	P.Tuck, Agua Caliente B. Nash, Ft. Yuma(via tel.) A.Brierty San.Man G.Kline, BLM also: CEC, AECOM.	BLM, PS	meeting	CEC SA/DEIS Workshop
CEC	4/29/10	9:00 - 17:00	CEC	P.Tuck, Agua Caliente B. Nash, Ft. Yuma(via tel.) A.Brierty San.Man G.Kline, BLM also: CEC, AECOM.	BLM, PS	meeting	CEC SA/DEIS Workshop
Agua Cal.	5/17/10	12:59	Agua Caliente BCI	Patti Tuck THPO		e-mail	Send cult reports via FTP (Blythe, Palen, Ford DL.)
P.Tuck	5/17/10	12:59	P.Tuck Agua Caliente BCI	G.Kline BLM		e-mail	set up FTP for transferring cult report
G. Kline	5/24/10	1:10pm	Agua Caliente BCI	Patti Tuck THPO		T&E	Send cult reports via FTP (Blythe, Palen, Ford DL.)

Sol. Millenniu m	5/25/10	9:30-14:00	Alice Harron/Sol. Millennium	S.Weidlich, and M. Tennyson (AECOM) J. Kalish, and G. Kline, BLM P.Tuck and S. Milanovich, Agua Caliente	BLM Palm Sprs.	meeting	Informational meeting on the technology and cultural resources for Blythe and Palen Projects.
Originator	**Date**	**time**	**from**	**to**	**location**	**medium**	**Subj.**
P.Tuck	5/26/10	10:42	P.Tuck, Agua Caliente	S. Weidlich M. Tennyson (AECOM) A. Harron (Sol mill.) G.Kline, BLM		e-mail	req. additional info from previous day's meeting.
G. Kline	5/24/10	1:10pm	Agua Caliente BCI	Patti Tuck THPO		T&E	Send cult reports via FTP (Blythe, Palen, Ford DL.)
P.Tuck	5/24/10	13:11	P.Tuck Agua Caliente BCI	G.Kline BLM et. al.		e-mail	Question re; CEQA/CEC
G.Kline	5/27/10	12:20	G. Kline BLM	P. Tuck, Agua Caliente		e-mail	Answers to meeting questions and requested information.
	6/1/10	1:20	P.Tuck Agua Caliente BCI	G. Kline, BLM		e-mail	verification of receipt of Cultural reports
P.Tuck	6/1/10	1:23	P.Tuck Agua Caliente BCI	G. Kline, BLM		e-mail	further verification of receipt of Cultural reports
	6/7/10	2:11	B.Nash Ft. Yuma Quechan	G.Kline BLM		e-mail	have not received reports for Genesis and Palen
G.Kline	6/7/10	3:26	G. Kline BLM	B.Nash Ft. Yuma Quechan		e-mail	Reports in the Mail
G.Kline	6/8/10	8:17	G.Kline	B.Nash Ft. Yuma Quechan		e-mail	notification of sending Palen and Genesis reports via USPS
B.Nash	6/8/10	8:20	B.Nash Ft. Yuma Quechan	G.Kline BLM		e-mail	question on Blythe (report) Isolates
G.Kline	6/8/10	12:27	G. Kline BLM	B.Nash Ft. Yuma Quechan		e-mail	answer to isolate Question in Blythe cultural report.
P.Tuck	6/10/10	12:39	P.Tuck Agua Caliente BCI	G. Kline		e-mail	Provide Palen Cult. Report
B. Nash	6/15/10	8:49	B. Nash, Ft. Yuma Quechan	G. Kline		e-mail	Confirmation of Palen and

							Genesis reports rec'd.
B. Nash	6/21/10	10:45	B. Nash, Ft. Yuma Quechan	G. Kline		e-mail	Request for Blythe Cult. Res. maps

Originator	Date	time	from	to	location	medium	Subj.
G.Kline	6/23/10	2:13	G. Kline BLM	P.Tuck, Agua Caliente BCI		e-mail	Sent Blythe, palen, and Genesis PAs
B. Nash	6/24/10	9:20	B. Nash, Ft. Yuma Quechan	G. Kline		e-mail	Confirmation of receipt of maps.
B.Nash	6/28/10	3:43	B. Nash, Ft. Yuma Quechan	G. Kline		e-mail	Request for site visit to Blythe (thermal Cobble features)
B. Nash	7/7/2010	1:41	B. Nash Ft. Yuma Quechan	G. Kline BLM		e-mail	Schedule Blythe Site Visit on Aug. 5th
B. Nash	8/3/2010	3:57	B. Nash Ft. Yuma Quechan	G. Kline BLM		e-mail	Particulars on Blythe Site Visit on Aug. 5th
C. Wood Chemehuevi Tr. Chair.	8/16/2010	9:30 to 12:00			Havasu Lk., CA	Govt. to Govt. Consult/Meeting	Discuss Fast Track and other Solar Projects.
P. Tuck	8/16/2010	2:12	P. Tuck	G. Kline		e-mail	Forwarding maps and cult report CD from AECOM
P. Tuck	8/24/2010	8:43	P. Tuck	G. Kline		e- Mail	Pick-up maps and CD>
S. Milanovich	9/2/2010	9:15	Fwd. S. Milanovich, Agua Caliente	G. Kline		e-mail	Robert Lundahl Opposition to Project.
BLM	9/7/2010	9:30-3:30		Riv. County, BLM, Ft. Yuma Quechan and Ft. Mojave Tr.	Holiday Inn Express, Blythe	Govt. to Govt. Consult/Meeting	Discuss Comm Site and Solar Projects
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman John James, Cabazon BMI		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairwoman Sherry Cordova, Cocopah Tribal Council		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman James Ramos, San		Letter	Draft PA and Request

				Manuel Band of Mission Indians			/Invitation to provide comments.

Originator	Date	time	from	to	location	medium	Subj.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman Eldred Enas, Colorado Tribal Council		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairperson Maryann Green, Augustine Band of Mission Indians		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman Robert Martin, Morongo Band of Mission Indians		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman Richard Milanovich, Agua Caliente Band of Cahuilla Indians		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman Darrell Mike, Twenty-Nine Palms Band of Mission Indians		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman Charles Wood, Chemehuevi Tribal Council		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	President Michael Jackson, Ft. Yuma Quechan Tribe		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairman Robert Martin, Morongo Band of Mission Indians		Letter	Draft PA and Request /Invitation to provide comments.
J. Kalish BLM	6/16/2010		BLM PSSCFO	Chairwoman Mary Resvaloso, Torres-Martinez Desert		Letter	Draft PA and Request /Invitation to provide

				Cahuilla Indians			comments.

APPENDIX J: EXAMPLE MONITORING AND DISCOVERY PLAN

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:

LSA Associates, Inc.

703 Palomar Airport Road Suite 260

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(760) 931-5471

May 26, 2010

And

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August 13, 2010

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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 approximatley18,000 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.

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.

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^2 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

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 NAGRPA 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.

APPENDIX A

SPECIFIC FIELD AND ANALYTICAL METHODS

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 ⅛-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 ⅛-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 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 Resharpening.* Continued use of the tool results in dulled edges. Resharpening 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 different 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/gorgets 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

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

AFFILIATION	NAME	TELEPHONE	EMAIL
Bureau of Land Management Cultural Resources			
California Energy Commission			
Tessera			
Construction Manager			
Monitoring Supervisor			
Principal Investigator			
Imperial County Coroner			

APPENDIX K: 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:

Bureau of Land Management

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May 28, 2010

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August 13, 2010

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Attachments

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 Ewiiaapaayp 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 Ewiiaapaayp 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

_____

California State Director, Bureau of Land Management Date

_____

California Desert District Manager, Bureau of Land Management Date

Invited Signatories

_____
Date

_____
Date

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Date

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Date

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Date

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Date

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Date

_____
Date

Attachment A

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

The monitor will halt construction within 100 feet of a discovery and barricade an area of at least 50 feet in diameter around the discovery. The remains will be left in place and exclusionary fencing will be placed in a 50-foot radius around the discovery.

↓

The archaeological monitor will 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 NAGPRA. Decisions regarding additional identification procedures and the continuation or permanent suspension of work at the discovery location will then be made by BLM.

↓

Items determined as modern (50 years old or less) and/or involved in a crime.

↓

Sheriff and/or Coroner assumes responsibility.

↓

Items determined as prehistoric or historic.

↓

BLM contacts Native American tribes within 24 hours by phone and provides the tribe(s) written documentation of the find within 3 days.

Attachment B

List of Native American Tribal Contacts

BIOLOGICAL RESOURCES
Testimony of Andrea Martine and Carol Watson

We are the authors of the Biological Resources section of the Staff Assessment. We have reviewed the comments and suggested edits to the Conditions of Certification by the project owner and other stakeholders. We also reviewed the relevant Conditions of Certification in the Final Decision for the original Blythe Solar Thermal project. After considering the information in the Staff Assessment, the discussion at the November 12, 2013 workshop and submitted comments on the Staff Assessment, we are making the following changes to Biological Resources Conditions of Certification. We find that these changes are consistent with the existing license and address significant project impacts, as described in the Staff Assessment, associated with the proposed photovoltaic project.

Condition of Certification Edits

Staff accepts the Petitioner's proposed changes to Conditions of Certification **BIO-7**, **BIO-14**, **BIO-18**, **BIO-19**, **BIO-20**, **BIO-22**, and **BIO-28**. During the public workshop on November 12, 2013 upon further clarification from the Petitioner, staff agreed to their proposed changes to Conditions of Certification **BIO-6, BIO-12** #1a and c, and **BIO-17** #1 and #4b. Also during the public workshop, the Petitioner and staff discussed additional changes:

- **BIO-5**: proposed language change will be placed in **BIO-1** since the change is applicable to the designated biologist duties, rather than the authority of the designated biologist and biological monitors.
- **BIO-8**: Petitioner will provide language changes to #3, #20, and #22 as discussed during workshop.
- **BIO-12**: The Petitioner is providing changes based on our discussion during the workshop for #1d. For #3h staff calculated the mitigation based on acreages provided in AFC table 5.1-2 using the REAT spreadsheet. Petitioner will be using the spreadsheet to recalculate the mitigation security. Staff recalculated the mitigation security to reflect the acreages per phase. The new values for each phase are as follows: phase 1 $3,894,690.77, phase 2 $3,296,307.63, phase 3 $3,719,727.52 and phase 4 $3,219,332.62. The Petitioner may have further comments on these values.
- **BIO-16**: Petitioner will provide language changes as discussed during the workshop to #3.
- **BIO-17**: Petitioner will provide language changes as discussed during workshop to #2bi, #5a, and the verification.

More extensive language edits were made to **BIO-15** and **BIO-24**, and these have been pasted below for reference. Staff's approach to golden eagle monitoring and management has changed slightly; and now more closely reflects the original Commission Decision condition language. Staff's recommendation of development

of an Eagle Conservation Plan has been deleted from **BIO-15**, and instead, preparation of a Golden Eagle Monitoring and Management Plan has been reinstated under Condition of Certification **BIO-24**. This condition was part of the original Commission Decision, and has been updated.

AVIAN AND BAT PROTECTION PLANS

BIO-15 The project owner shall prepare a Bird and Bat Conservation Strategy (BBCS) and submit it to the CPM for review and approval, in consultation with BLM, CDFW, and USFWS for review and comment. Alternately, the CPM, in conjunction with the USFWS, BLM, and CDFW, may determine the appropriate plan for the project site and provide it to the project owner for implementation. In the event a standard monitoring plan is developed for the industry, the CPM may request the project owner implement that plan, in conjunction with the USFWS and CDFW, and accounting as necessary for project-specific technology or onsite environmental conditions or constraints. The BBCS shall provide for the following:

- Survey and monitor onsite ~~and offsite~~ avian use, **behavior, or other relevant project-related avian and bat factors**~~and behavior~~ **prior to commencing construction** to document species composition. ~~on and offsite, compare onsite and offsite rates of avian and bat use, document changes in avian and bat use over time (pre and post construction), and evaluate the changes in annual abundance and distribution of birds in and near the facility.~~ The project owner will submit all data gathered onsite to the CPM as specified herein **and within the BBCS**, or as requested by the CPM, and will also make consulting biologists available to answer CPM inquiries.
- Implement a statistically robust avian and bat mortality and injury monitoring program to identify the extent of potential avian or bat mortality or injury from collisions with facility structures, including: assessing levels of collision-related mortality and injury with PV panels. **The plan shall dictate which project features should be monitored and the frequency of monitoring, and shall also prescribe survey design based on sound scientific hypotheses, with the goal of fully monitoring and evaluating project effects.**~~ perimeter fences, gen-tie, and other project features and structures~~;
  - ~~documenting flight spatial patterns via radar that may be associated with collision-related mortality and injury, if any.~~
- Implement an adaptive management and decision-making framework for reviewing, characterizing, and responding to mortality monitoring results.

- Identify specific conservation measures and/or programs to avoid, minimize, ~~rectify,~~ reduce or eliminate **adverse impacts** over time and evaluate the effectiveness of those measures.
- **Describe project owner responsibility for funding rehabiliatory care and transport for injured birds or bats, and determine appropriate measures to treat injured birds and bats**.

BBCS Components

~~The project owner shall prepare and implement a BBCS adopting all requirements applicable to solar generation in current guidelines recommended by the USFWS~~. The BBCS shall **minimally** include the following components:

1. Preconstruction Baseline survey results. A description and summary of the baseline survey methods, raw data, and results.
2. Formation of a technical advisory committee (TAC), if requested by the CPM. The TAC will facilitate concurrent project owner, CPM, and state and federal wildlife agency review of seasonal and annual survey results, **development of decision-making framework for evaluating** the effectiveness of the adaptive management measures implemented by the project owner, modification of the surveys in response to the results, if necessary, and the identification of additional mitigation responses that are commensurate with the extent of impacts that may be identified in the monitoring studies. A meeting schedule for the TAC will be identified, for regular review of avian and bat injury and mortality monitoring results, and recommend any necessary changes to monitoring, adaptive management, and appropriate adaptive mitigation~~per~~ . The TAC will also **advise** ~~assist~~ the CPM in implementing the following provisions: #2 - #8. The CPM has the authority to dissolve the TAC.
3. The BBCS will contain full survey methodology and field documentation, identification of appropriate ~~onsite and offsite~~ survey locations, control sites, and ~~the~~ seasonal considerations. Bat acoustic sampling may be implemented depending on results of the project owner's baseline studies, including preconstruction data.
4. Avian and bat mortality and injury monitoring: An avian and bat injury and mortality monitoring program shall be implemented, including:

(a) Onsite monitoring that will systematically survey representative locations within the facility, at a level that will produce statistically robust data; account for potential spatial bias and allow for the extrapolation of survey results to non-surveyed areas **within the solar plant site**

boundary and the survey interval based on scavenger and searcher efficiency trials and detection rates.

(b) Low-visibility and high-wind weather event **reporting** ~~monitoring~~ to document potential weather-related collision risks that may be associated increased risk of avian or bat collisions with project features, including foggy, highly overcast, or rainy night-time weather typically associated with an advancing frontal system, and high wind events (40 miles per hour winds) are sustained for period of greater than 4 hours. ~~The monitoring report shall include survey frequency, locations and methods.~~

(c) Statistically robust scavenger and searcher efficiency trials ~~prior and~~ post construction to document the extent to which avian or bat fatalities remain visible over time and can be detected within the project area and to adjust the survey timing and survey results to reflect scavenger and searcher efficiency rates.

(d) Statistical methods used to generate facility estimates of potential avian and bat impacts based on the observed number of detections during standardized searches during the monitoring season ~~for which the cause of death can be determined and is determined to be facility-related~~.

(e) Field detection and mortality or injury identification, cause attribution, handling and reporting protocols consistent with applicable legal requirements; **all dead or injured bats and avian species found onsite will be assumed affected by the project, and all will be reported and used in fatality estimates**.

5. Survey schedule and period. ~~All~~ Post-construction monitoring studies included in the BBCS shall be ~~conducted by a third party contractor for at least~~ **for at least two** ~~three~~ year~~s~~ following **commencement of** commercial operation **of each individual unit.** ~~and approval of the BBCS by the CPM. All surveys and monitoring studies included in the BBCS shall be conducted during construction and commercial operation.~~ At the end of **two years of surveys**, the CPM shall determine whether the survey program shall be continued for subsequent periods, based on results of onsite monitoring. The monitoring program may be modified with the approval of the CPM in response to survey results, identified scavenging efficiency rates, or other factors to increase monitoring accuracy and reliability or in accordance with the adaptive management decision-making framework included in the BBCS.

6. Adaptive management. An adaptive management program shall be developed to identify and implement reasonable and

feasible measures **needed to** ~~that would~~ reduce levels of avian or bat mortality or injury attributable to project operations and facilities. Any such impact reduction measures must be commensurate (in terms of factors that include geographic scope, costs, and scale of effort) to the level of avian or bat mortality or injury that is specifically and clearly attributable to the project facilities. Adaptive actions undertaken will be discussed and evaluated in survey reports. The adaptive management program shall include the following elements:

(a) Reasonable measures for characterizing the extent and significance of detected mortality and injuries clearly attributable to the project.

(b) **Potential** measures that the project owner ~~will~~ **could** implement to adaptively respond to detected mortality and injuries attributable to the project, including passive avian diverter installations along the perimeter or at other locations within the project to avoid site use, the use of sound, light or other means to discourage site use consistent with applicable legal requirements, onsite prey or habitat control measures consistent with applicable legal requirements, and additional perch and nest **minimizing** ~~proofing~~ of project facilities.

7. Adaptive Mitigation: The CPM may require the project owner to implement adaptive mitigation for significant onsite injury or mortality of birds and bats, based on recommendations of the TAC**, if utilized, or as outlined within the BBCS**~~.~~ Such measures shall be approved by the CPM and may include, but not be limited to: (i) restoration of degraded habitat with native vegetation; (ii) restoration of agricultural fields to bird habitat; (iii) management of agricultural fields to enhance bird populations; (iv) invasive plant species and artificial food or water source management; (v) control and cleanup of potential avian hazards, such as lead or microtrash; (vi) retrofitting of buildings to minimize collisions; (vii) retrofitting of conductors and above ground cables to minimize collisions; (viii) animal control programs; (ix) support for avian and bat research and/or management efforts conducted by entities approved by the CPM within the project's mitigation lands or other approved locations; (x) funding efforts to address avian diseases or depredation due to the expansion of predators in response to anthropomorphic subsidies that may adversely affect birds that use the mitigation lands or other approved locations; and (xi) contribute to the Migratory Bird Conservation Fund managed by the Migratory Bird

Conservation Commission. Adaptive mitigation will be discussed and evaluated in survey reports.

8. ~~Eagle Conservation Plan (ECP): The project owner shall prepare and implement an Eagle Conservation Protection Plan adopting all requirements applicable to solar generation as outlined in guidelines recommended by the USFWS (currently USFWS Land Based Wind Energy Guidelines 2011b). The ECP may be prepared as a stand-alone document or included as a chapter within the BBCS. The ECP shall describe all available baseline data on golden eagle occurrence, seasonality, activity, and behavior throughout the project area and vicinity. The ECP shall outline a study protocol to include annual pedestrian and/or helicopter surveys of golden eagle breeding sites within a 10 mile radius of the project site, to be reviewed and approved by the CPM, in consultation with the USFWS, BLM, and CDFW.~~

~~The ECP shall describe all proposed measures to minimize death and injury of eagles from (1) collisions with facility features including PV panels and gen-tie line towers or transmission lines, and (2) electrocutions on transmission lines or other project components. The ECP shall describe and evaluate any adaptive management, minimization, or mitigation efforts taken pursuant to BIO-15 #6 and BIO-15#7.~~

Verification: Prior to the start of construction, a draft BBCS shall be submitted to the CPM for review and comment in consultation with CDFW, BLM, and USFWS. ~~If the CPM decides to take this responsibility, in conjunction with the BLM, USFWS, and CDFG, the project owner will be notified in advance.~~ A final BBCS shall be submitted to the CPM within 60 days of construction commencement. The project owner shall provide the CPM with copies of any written or electronic transmittal from the USFWS, BLM, or CDFW related to the BBCS within 30 days of receiving any such transmittal. ~~The EPP, if submitted under separate cover, shall follow the same timeline for review, edit, and approval as the BBCS.~~

Reporting Protocol: Verification of Survey Results (including preconstruction bird and bat use, radar data, mortality monitoring, and golden eagle monitoring): All survey results and complete reports, including raw data, shall be submitted to the CPM after each survey season and in an annual summary report throughout the course of the study period, or as otherwise directed by the CPM. The results of onsite injury and mortality monitoring will be reported monthly or more frequently, if requested by the CPM. The reports will include all data required as part of the monitoring program. The Monitoring Study shall continue until the CPM, in consultation with CDFW, BLM, and USFWS, concludes that the cumulative monitoring data provide sufficient basis

for estimating long-term bird mortality for the project. The reports will include all monitoring data required as part of the monitoring program. The reports shall also assess any adaptive management measure implemented during the prior year as approved by the CPM. After the ~~third~~ **~~first~~ second** year of the monitoring program, the CPM shall meet and confer with the TAC (if convened) to **determine if subsequent ~~second~~ monitoring periods are warranted** ~~the study period shall be extended~~ based on data quality and sufficiency of analysis, or if needed, to document efficacy of any adaptive management measures undertaken by the project owner. If a TAC was not convened, then ~~the study period may be extended~~ ~~as directed by~~ the CPM, in consultation with CDFW, BLM, and the USFWS, **shall determine if another year of monitoring is warranted**. If a carcass or injured ~~live~~ special status species is found at any time by the monitoring study or project operations staff, the project owner, Designated Biologist, or other qualified biologist that may be identified by the Designated Biologist shall contact the CPM, CDFW and USFWS by email, fax or other electronic means within one working day of any such detection. Verification of other injuries or mortalities shall be within 48 hours, or as otherwise directed by the CPM.

GOLDEN EAGLE INVENTORY AND MONITORING

BIO-24 The project owner shall implement the following measures to avoid or minimize project-related construction impacts to golden eagles.

1. Annual Inventory During Construction. For each calendar year during which construction will occur an inventory shall be conducted to determine if golden eagle territories occur within one mile of the project boundaries. Survey methods for the inventory shall be as described in the **USFWS Land Based Wind Energy Guidelines (2011b)** ~~Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (Pagel et al. 2010)~~ or more current guidance from the USFWS **or CPM**.
2. Inventory Data: Data collected during the inventory shall include at least the following: territory status (unknown, vacant, occupied, breeding successful, breeding unsuccessful); nest location, nest elevation; age class of golden eagles observed; nesting chronology; number of young at each visit; digital photographs; and substrate upon which nest is placed.
3. ~~Determination of Unoccupied Territory Status: A nesting territory or inventoried habitat shall be considered unoccupied by golden eagles ONLY after completing at least two full surveys in a single breeding season. In circumstances where ground observation occurs rather than aerial surveys, at least two ground observation periods lasting at least four hours or more are necessary to designate an inventoried habitat or territory as unoccupied as long as all potential nest sites and~~

~~alternate nests are visible and monitored. These observation periods shall be at least 30 days apart for an inventory, and at least 30 days apart for monitoring of known territories.~~

4. Monitoring and Adaptive Management Plan: If an occupied nest[1] is detected within one mile of the project boundaries, the project owner shall prepare and implement a Golden Eagle Monitoring and Management Plan for the duration of construction to ensure that project construction activities do not result in injury or disturbance to golden eagles. The monitoring methods shall be consistent with those described in the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (Pagel et al. 2010) or more current guidance from the USFWS. The Monitoring and Management Plan shall be prepared in consultation with the USFWS. Triggers for adaptive management shall include any evidence of project-related disturbance to nesting golden eagles, including but not limited to: agitation behavior (displacement, avoidance, and defense); increased vigilance behavior at nest sites; changes in foraging and feeding behavior, or nest site abandonment. The Monitoring and Management Plan shall include a description of adaptive management actions, which shall include, but not be limited to, cessation of construction activities that are deemed by the **CPM** ~~Designated Biologist~~ to be the source of golden eagle disturbance.

Verification: No fewer than 30 days from completion of the golden eagle inventory the project owner shall submit a report to the CPM, CDFG, and USFWS documenting the results of the inventory.

If an occupied nest is detected within one mile of the project boundary during the inventory the project owner shall contact staff at the USFWS Carlsbad Office and CDFG within one working day of detection of the nest for interim guidance on monitoring and nest protection. The project owner shall provide the CPM, CDFG, and USFWS with the final version of the Golden Eagle Monitoring and Management Plan within 30 days after detection of the nest. This final Plan shall have been reviewed and approved by the CPM in consultation with USFWS and CDFG.

[1] An occupied nest is one used for breeding by a pair of golden eagles in the current year. Presence of an adult, eggs, or young, freshly molted feathers or plucked down, or current years' mutes (whitewash) also indicate site occupancy. Additionally, all breeding sites within a breeding territory are deemed occupied while raptors are demonstrating pair bonding activities and developing an affinity to a given area. If this culminates in an individual nest being selected for use by a breeding pair, then the other nests in the nesting territory will no longer be considered occupied for the current breeding season. A nest site is considered occupied throughout the periods of initial courtship and pair‐bonding, egg laying, incubation, brooding, fledging, and post‐fledging dependency of the young.

Staff's Response to Biological Resource Comments

Staff have reviewed the comments provided by Dr. Smallwood (TN: 201152). We appreciate the specific expertise that Dr. Smallwood provides, particularly in the arena of avian impacts and mitigation approach. As a brief overview, staff has several general responses.

Specific to the Blythe Solar Power Project, the Energy Commission has undertaken an amendment process, to assess impacts specific to the change in technology. This is a slightly different process than a new application for certification, in that the petitioner already holds a permit from the Energy Commission to build a parabolic trough system on the project site. In processing an amendment, staff is limited to assessing impacts that are new and associated with the change in technology, updating information where technical or agency approach has changed appreciably, or where the impacts have increased over those previously analyzed. This means that certain issues were not re-examined; among them, the approach to determining and mitigating burrowing owl impacts, desert tortoise impact assessment, and issues of wildlife movement and habitat fragmentation.

Staff has incorporated several proposed edits or concepts into the avian condition of certification, **BIO-15**, including funding rehab care for injured birds or bats, as well as language regarding fatality reporting. Other edits, particularly those made regarding the formulation and development of the Technical Advisory Team, are still under consideration by staff.