APPENDIX 1

Location Maps

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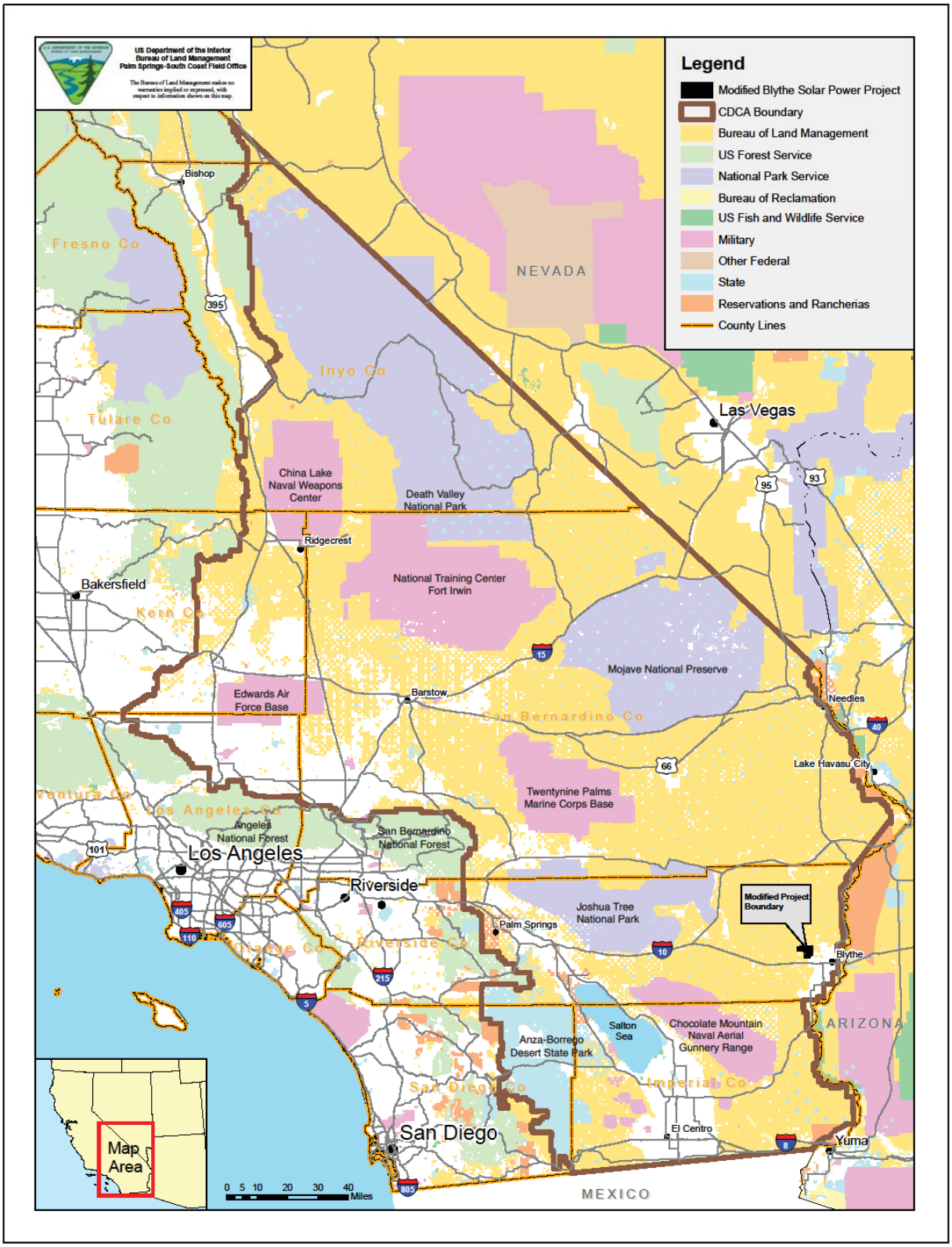
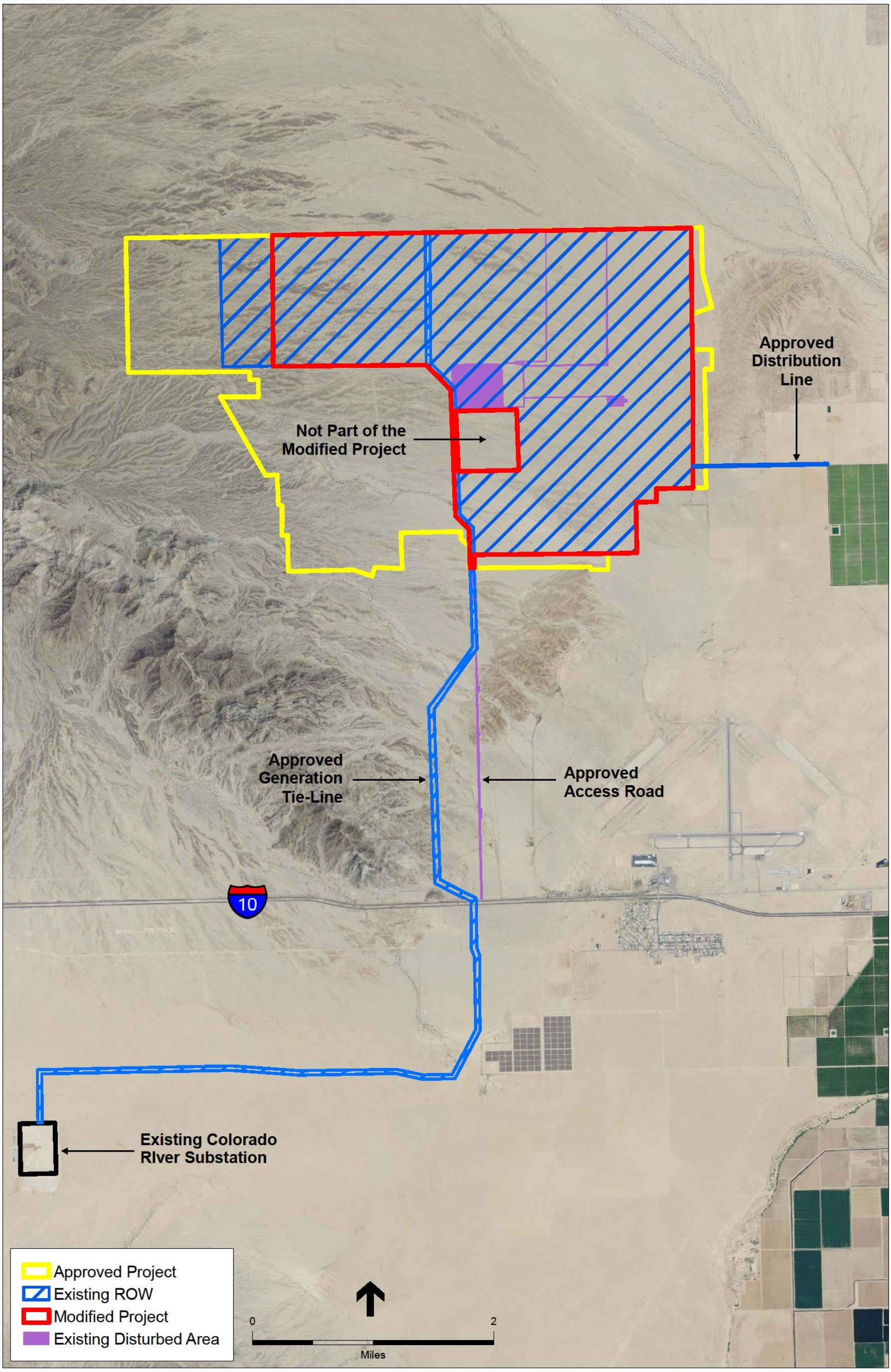


SOURCE: BLM 2010

Modified Blythe Solar Power Project
Figure 1
Regional Context



SOURCE: TetraTech, 2013

Modified Blythe Solar Power Project
Figure 2
Proposed Modification

APPENDIX 2

Existing Biological Opinion

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
Ecological Services
Carlsbad Fish and Wildlife Office
6010 Hidden Valley Road, Suite 101
Carlsbad, California 92011

In Reply Refer To:
FWS-ERIV-09B0186-10F0880

OCT 0 8 2010

MEMORANDUM

To: Field Manager, Bureau of Land Management, Palm Springs South Coast Field Office, Palm Springs, California

From: Field Supervisor, Carlsbad Fish and Wildlife Office
Carlsbad, California

Subject: Section 7 Biological Opinion on the Blythe Solar Power Plant, Riverside County, California

This memorandum transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the construction, operation, and maintenance of the proposed Blythe Solar Power Plant project (project or BSPP), located in Riverside County, California, and its effects on the threatened desert tortoise (*Gopherus agassizii*, "tortoise") in accordance with section 7 of the Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*). Your request for formal consultation, dated July 16, 2010, was received on July 27, 2010. Because the proposed project is not in designated critical habitat for the tortoise, critical habitat will not be adversely affected.

This biological opinion is based on information provided in the following documents and communications: (1) the Bureau of Land Management/California Energy Commission's (BLM/CEC) joint *Staff Assessment and Draft Environmental Impact Statement, Blythe Solar Power Project* (BLM and CEC 2010), (2) the BLM's *Plan Amendment/Final Environmental Impact Statement for the Blythe Solar Power Project* (BLM 2010), (3) the CEC's *Blythe Solar Power Project Revised Staff Assessment* (CEC 2010a); (4) the *Blythe Solar Power Project Revised Draft Biological Assessment* (AECOM 2010a); (5) the CEC's Blythe Solar Power Project Commission Decision (CEC 2010b), (6) pre-project desert tortoise survey reports (AECOM 2010b, 2010c), (7) final and draft revised desert tortoise recovery plans (Service 1994a, 2008), (8) supplemental materials provided during the consultation process, (9) electronic transmissions from BLM and Palo Verde Solar (applicant, formerly Solar Millennium), and (10) pertinent literature contained in our files. The project file for this consultation is located at the Carlsbad Fish and Wildlife Office (CFWO).

CONSULTATION HISTORY

The Service received an updated Plan of Development for the project from the applicant on December 24, 2008, and began early consultation on this project by participating in a conference call with the applicant, BLM, CEC, and California Department of Fish and Game (CDFG) in

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February 2009. Between February 2009 and August 2010, the Service, BLM, CEC, CDFG, and/or the applicant participated in numerous meetings and conference calls regarding this project, including participating in CEC public workshops and the CEC evidentiary hearing on July 15, 2010. The Service coordinated early with BLM, CEC, and CDFG on the development of measures in the CEC/BLM/draft Environmental Impact Statement (EIS) to avoid, minimize, and offset impacts to the desert tortoise, and we conducted several visits to the project site with these agencies.

In preparing this biological opinion, we provided a draft project description to the BLM and applicant on August 19, 2010, and September 28, 2010, and a draft biological opinion was provided to the BLM on September 29, 2010. All comments received from the BLM and applicant were incorporated into this biological opinion, as appropriate.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The proposed action is the BLM's issuance of a right-of-way (ROW) grant that would authorize construction, operation, maintenance, and decommission of a commercial solar power-generating facility on approximately 3,804 hectares (ha) [9,400 acres (ac)] of BLM-managed lands. The proposed project is located in Riverside County, California, approximately 13 kilometers (km) [8 miles (mi)] northwest of Blythe and approximately 3 km (2 mi) north of the Interstate 10 (I-10) corridor (Figure 1). Project components generally include construction, operation, and maintenance of the solar power plant site and support facilities, an access road/utility corridor, and a gen-tie transmission line. The proposed project will disturb an estimated total of 2,843 ha (7,025 ac) of which approximately 2,816 ha (6,958 ac) is desert tortoise habitat (Table 1). Any non-emergency expansion of construction, operation, or maintenance activities into areas outside of the areas considered in this biological opinion will require BLM approval and tortoise clearance surveys, and may require reinitiation of consultation with the Service.

Construction

The project includes construction of a 1,000-megawatt (MW) commercial solar thermal power-generating facility that will use solar parabolic trough technology to generate electricity. Arrays of parabolic mirrors will collect heat from the sun to then warm the heat transfer fluid (HTF) in the solar field piping. Through a series of heat exchangers, heat will be released to generate high pressure steam that will then be fed to a steam turbine generator to generate electricity. See CEC (2010a) and AECOM (2010a) for a detailed project description.

<u>Solar Power Plant and Support Facilities</u>

The solar power plant site (plant site) will consist of four independent 250-MW power units (Units 1 to 4; Figure 2). Each unit will 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 unit will also have its own HTF pumping and freeze-protection system, solar steam generator, steam turbine generator, an air-cooled condenser for cooling, transmission lines and related electrical system, support equipment, including water treatment system, emergency generators, and two 2-ha (4-ac) evaporation ponds. The plant site will also include office and warehouse/maintenance buildings, concrete batch plant, enclosed water storage tanks, fuel depot, assembly hall, parking areas, and equipment/materials laydown areas. Only a portion of the plant site will be paved, including the service roads to the power units and 2 ha (6 ac) of each of the 7-ha (18-ac) power units. The remainder will remain unpaved and without a gravel surface to prevent rock damage to mirrors from vehicle traffic.

Up to 10 groundwater wells will be drilled within the plant site to supply water for facility construction, operation, and maintenance. Total water consumption for the facility is estimated at approximately 74 ha-m (600 ac-feet) per year. Because the BSPP project will use dry cooling, the primary water uses will be solar mirror washing, feed water makeup, fire water supply, onsite domestic use, and cooling water for auxiliary equipment heat rejection (auxiliary cooling tower and auxiliary boiler). Sanitary wastewater will be collected for treatment in septic tanks and disposed of via leach fields.

The entire plant site, including support facilities, will be secured with a combination of chain link and wind fencing. Chain-link metal fabric security fencing will consist of 2-meter (m) [8-foot (ft)] tall fencing with 0.3 m (1 ft) barbed wire or razor wire on top. Desert tortoise exclusion fencing will also be installed along the outside of the entire perimeter security fence. Controlled access gates will be located at the site entrance. Wind fencing, consisting of 9-m (30-ft) tall A-frames and wire mesh, will be installed along the east and/or west sides of each solar field.

Construction power will be provided by a temporary power line constructed from the Southern California Edison's (SCE) 12.47-kilovolt (kV) distribution line one mile east of the plant site, near Blythe, to the plant site (Figure 2). The power line will either be a buried or overhead line (on monopoles) and will require construction of a new dirt access road along the power line alignment.

The development of the plant site will also include channelizing and rerouting storm flows along the project perimeter into five 46-m (150-ft) wide channels along the north, southeast, south, and west boundaries, and through the center of the site (Figure 2). Flows will be returned to their sheet flow regime east and southeast of the project footprint. These rerouted channels will intercept flows prior to their entry to the site and convey them in realigned channels to approximately the same locations where they exit the site under existing conditions. Outlets for each channel will end in fan diffusers that will return the water to existing down-gradient locations over a wider area by converting concentrated flows to overland flow. Fan diffusers use soil cement weirs to spread the drainage water over an ever-increasing flow surface as water moves downstream from the throat of the diffuser to the face of the diffuser. The intent of the diffusers is to modify the height of water as it moves downstream, so that when the drainage water leaves the diffuser it is closely representative of the predevelopment condition. Scour protection will consist of soil cement made with native material and native soils to the extent

practicable, and will be placed on the channel sides and bottoms in stress areas such as curves and slope transitions. No scour protection is proposed for the channel bottom in the straight sections of the channels. This is to allow the low flows to meander across the bottom, replicating as nearly as possible the flow regimes under current conditions. Channels would also collect onsite storm water flows and direct them offsite to the east and southeast. All of the rerouted drainage channels, except the central channels, will be located along the outer side of the perimeter security fence. Because of the installation of the perimeter security fence, the inlets and outlets of the central drainage channels traversing the plant site will not be fenced. Instead, a tortoise-proof fence, or similar structure sufficient to exclude desert tortoises, will be installed across the central channels at the location of the security fence to prevent tortoises from entering the plant site.

Access Roads/Utility Corridor

Access to the plant site will be on a new, 8-km (5-mi) paved road heading north from the existing Black Rock Road (Figure 2). A portion of Black Rock Road will be paved from Airport/Mesa Drive exit (off I-10) to the new turn-off for the plant access road. The new access road will also be used as a utility corridor that will include buried lines (telecommunications and natural gas) and a portion of the gen-tie transmission line. The new gas pipeline will connect to an existing Southern California Gas Company main pipeline south of I-10. Voice and data communications would be provided by a new twisted pair telecommunications cable. The routing for this cable will end at the existing infrastructure near Mesa Drive. In addition, the project has two other telecommunication lines required by the California Independent System Operators (CAISO) to provide operational data to the Colorado River Substation. The primary transmission-related telecommunication line will be strung overhead along the same poles as the 230-kV gen tie line to the Colorado River Substation. A redundant transmission-related telecommunications line will be a buried cable similar to the telecommunications cable for the project. Routing for both buried telecommunications cables will be adjacent to the site access road for the portion north of I-10. The redundant telecommunications line continues south of I-10 to the Colorado River Substation following the route of the gen-tie line, while the project telecommunications cable follows Black Rock Road to Mesa Drive. Laydown and staging of equipment and materials needed for construction of the access road/utility corridor will be located within the plant site or within the impact area associated with the access road/utility corridor.

Gen-tie Transmission Line

A new approximately 17-km (11-mi) 230-kV double-circuit, monopole gen-tie transmission line will be also be constructed as part of the project (Figure 2). To address Riverside County Airport Land Use Commission concerns, a portion of the gen-tie line will be outside of but parallel to the access road/utility corridor. A 396-m (1,300-ft) section of line perpendicular to Blythe Airport Runway 8-26 (oriented east-west) will be supported by 21-m (70-ft) H-Frame single circuit structures. A new unpaved access road will be constructed for the portion of the line that lies west of the access road/utility corridor. Laydown and staging of equipment and materials needed

for construction of the transmission line will be located within the plant site or within the impact area associated with the gen-tie line or access road/utility corridor. Pulling and splicing sites for the transmission line will also serve as laydown areas for small amounts of material (e.g., wire).

The transmission line will extend south from the plant site primarily along the access road/utility corridor to a point south of I-10, and then turn west to connect to SCE's planned Colorado River Switchyard (CRS) substation. BLM and SCE are currently undergoing section 7 consultation with the Service on the CRS substation as part of the Devers to Palo Verde No. 2 Transmission Line (DPV2) project. Therefore, the CRS substation is not part of the project description for the BSPP project. The substation is planned in the area immediately west of the end of the gen-tie transmission line (Figure 2).

Project construction is scheduled to begin in late 2010 on the first unit and continue for a total of 69 months. Project construction will require an average of about 600 employees, peaking at approximately 1,000 workers in month 16 of construction. Commercial operation of the first completed Unit 1 is anticipated to begin in mid-2013, with subsequent units coming online in 6- to 12-month intervals.

Construction Phasing

Project construction will occur in 3 phases, Phases 1a, 1b, and 2 (Figure 2), generally following development of the solar units, and will impact approximately 311 ha (769 ac), 1,212 ha (2,995 ac), and 1,292 ha (3,193 ac), respectively (see BIO-28 in CEC 2010b). All 3 phases will include construction of linear and nonlinear facilities.

Phase 1a linear facilities will include improvements to Black Rock Road and construction of the new access road from Black Rock Road north to the shared facilities area, the buried telecommunications and natural gas lines within the utilities corridor from Black Rock Road to the shared facilities area, the temporary construction power line from offsite to the shared facilities area, a water well area, and a portion of the rerouted drainage channel in the northeast corner, but outside of, the plant site. Phase 1a nonlinear facilities will include construction of the shared facilities area (containing a concrete batch plant, fueling depot, assembly hall, offices/trailers, parking area, and materials/equipment laydown/storage areas) and a portion of the Unit 1 power block and solar field. Phase 1a will also include the installation of temporary and permanent tortoise exclusion fencing. Temporary tortoise exclusion fencing will be installed around portions of the nonlinear features that do not correspond to permanent security fencing and may also be installed around linear features where a monitor will not be present in the immediate vicinity of construction activities. A portion of the permanent security fencing may be installed where Phase 1a corresponds with the permanent plant site boundary, and would include construction of the associated permanent tortoise exclusion fencing.

Phase 1b linear facilities will include construction of the gen-tie transmission line from the shared facilities area to the future substation and portions of the rerouted drainage channels associated with Units 1 and 2. Phase 1b nonlinear facilities will include construction of the

remainder of the Unit 1 solar field, all of the Unit 2 power block and solar field, and the land treatment unit. Similar to Phase 1a, Phase 1b will also include the installation of a portion of the permanent security fencing and both temporary and permanent tortoise exclusion fencing.

Phase 2 linear facilities will include construction of the rerouted drainage channels associated with Units 3 and 4. Phase 2 nonlinear facilities will include construction of the Unit 3 and Unit 4 power blocks and solar fields, the remainder of the power plant support facilities, and the construction/laydown area. Similar to Phases 1a and 1b, Phase 2 will also include the installation of a portion of the permanent security fencing, and temporary and permanent tortoise exclusion fencing.

Desert tortoise clearance surveys associated with construction of linear facilities, temporary tortoise exclusion fencing, and the perimeter security fence during Phases 1a, 1b, and 2 may be conducted during any season. Temporary tortoise exclusion fencing will be installed around linear features, unless a biological monitor is present in the immediate vicinity of construction activities, or any subset of the plant site phasing that does not correspond to permanent perimeter fencing. Temporary tortoise exclusion fencing will be installed prior to clearance surveys around nonlinear features. Desert tortoise clearance surveys associated with construction of nonlinear facilities during Phase 1a also may be conducted during any season. However, tortoise clearance surveys associated with construction of nonlinear facilities during Phases 1b and 2 will only be conducted during the desert tortoise's most active season (April to May, September to October). Surveys outside of these periods require approval by CFWO. Clearance surveys will be conducted in accordance with the Service's *Desert Tortoise Field Manual* (Service 2009).

<u>Phase 1a</u>

Any tortoises found during clearance surveys of linear facilities outside of the plant site (i.e., along the access road/utility corridor or gen-tie transmission line) will be moved out of harm's way within 500 m (1,640 ft) of the disturbance area. Procedures for handling tortoises will be conducted in accordance with the Service's *Desert Tortoise Field Manual* (Service 2009).

Any desert tortoises found on the surface or in a burrow during clearance surveys of linear facilities on the plant site (i.e., access road, construction powerline, utilities corridor, and water well) will be moved out of harm's way within 500 m (1,640 ft) of the disturbance area and considered a translocatee[1]. Any tortoises found during clearance surveys of nonlinear facilities on the plant site (i.e., shared facilities area, portion of unit 1) will be followed back to their burrow, contained within a 1 ha (2.5 ac) pen, monitored until the active season then considered a translocatee. Any tortoises found on the surface during clearance surveys of the perimeter security fence, rerouted drainage channels, and tortoise exclusion fencing associated with nonlinear facilities on the plant site, will be followed back to its burrow. If its burrow is on the

[1] "Translocatee" refers to tortoises that will be transmittered, given health assessments, and monitored in accordance with the Service's translocation guidance (Service 2010b) or in accordance with the final Relocation/Translocation Plan if approved by the Service at the time of Phase 1a construction activities.

plant site, then it will be contained within a 1 ha (2.5 ac) pen, monitored until the active season and considered a translocatee. If the burrow is off the plant site, the tortoise will be moved out of harm's way within 500 m (1,640 ft) of the disturbance area and considered a translocatee.

Phases 1b and 2

Any tortoises found during clearance surveys of linear facilities outside of the plant site (i.e., along the access road/utility corridor or gen-tie transmission line) will be moved out of harm's way within 500 m (1,640 ft) of the disturbance area in accordance with the Service's *Desert Tortoise Field Manual* (Service 2009) or more recent guidance. Any tortoises found during clearance surveys of nonlinear facilities on the plant site or found during clearance of the tortoise exclusion fencing, rerouted drainage channels, or perimeter security fencing will be handled and moved in accordance with the final Relocation/Translocation Plan.

Operations and Maintenance

Operation and maintenance (O&M) will occur within the plant site during the 30-year life of the project. While electrical power will be generated only during daylight hours, the plant site will be staffed 24 hours a day, 7 days per week by a total estimated workforce of 221 full time employees (when all four units are operating).

Within the fenced plant site, routine O&M will include such activities as maintenance and repair of the perimeter fence, access gates, solar array components, support facilities, and evaporation ponds, mirror washing, vehicle and equipment movement, and vegetation removal. Solar mirrors will be sprayed with treated water once or twice per week, determined by the reflectivity monitoring program. Mirror washing will use approximately 28 ha-m (230 ac-feet) per year of water. Washing will generally be done at night and will involve a water truck spraying treated (i.e., demineralized) water on the mirrors in a drive-by fashion. Because the mirrors will be angled down for washing, water will not accumulate on the mirrors; instead, it will fall from the mirrors to the ground. Due to the small volume, the applicant anticipates the water will soak into the soil with no appreciable runoff. Any remaining rinse water from the washing operation is expected to evaporate on the mirror surface.

Outside of the fenced plant site, O&M activities will be conducted within the access road/utility corridor, gen-tie transmission line ROW, rerouted drainage channels, and along the outer side of the perimeter security fence. Routine O&M activities associated with the gen-tie transmission line, access road, and utility corridor will include periodic cleaning of the line conductors and replacement and/or repair of equipment damaged by wind, dust, or accident, road grading and drainage structure repairs to maintain a drivable surface along the access roads, and repair of the perimeter security fence. Such activities are anticipated to occur throughout the year as needed. The newly constructed access road to the plant site and dirt roads will provide O&M access to the gen-tie transmission line ROW and utility corridor. A dirt road created during construction will provide O&M access to rerouted drainage channels and the outer side of the perimeter security fence.

O&M of the rerouted channels will occur to reduce the hydraulic roughness, improve flood conveyance capacity, and maintain adequate protection of the stream banks from erosion, and will include vegetation management to maintain cover at less than 38 centimeters (cm) [15 inches (in)] in height, periodic debris removal, and erosion repairs. Maintenance will occur predominantly by hand crews and pickup truck; however, it may be necessary to use heavy equipment (e.g., loader, excavator, and wheel dump trucks) to repair structural features and clean out debris following large storm events.

According to information provided by the applicant, routine O&M activities are expected to occur along existing access roads, access roads created for the project, and areas previously disturbed during construction-related activities. Therefore, we do not expect routine O&M activities will result in additional direct habitat disturbance above what will be disturbed during construction activities.

Decommissioning

The planned operational life of the proposed project is 30 years, but operation life of the facility may be longer or shorter depending on economic or other circumstances. If the facility were to become economically non-viable before 30 years of operation, permanent closure could occur sooner. In any case, BLM will require a Decommissioning Plan be prepared and put into effect when permanent closure occurs. The procedures provided in the Decommissioning Plan will be developed to ensure compliance with applicable laws and regulations, and to ensure public health and safety and protection of the environment. The Decommissioning Plan will be submitted to the BLM for review and approval prior to a planned closure. When the BLM begins to consider decommissioning, they will contact the Service to determine if additional consultation, pursuant to section 7(a)(2) of the Act, would be appropriate. Consequently, we will not analyze the potential effects of decommissioning on the desert tortoise in this biological opinion.

Conservation Measures

The proposed project includes conservation measures that will be implemented to avoid, minimize, and offset potential adverse effects to the tortoise. These measures were developed in coordination with the BLM, CEC, CDFG, and applicant, and correspond directly to the CEC's conditions of certification BIO-1 thru BIO-14, BIO-27, and BIO-28 described in the CEC's Final Decision on the proposed project (CEC 2010b). Therefore, we are incorporating by reference into this biological opinion, the CEC's conditions of certification BIO-1 thru BIO-14, BIO-27, and BIO-28 as described in the CEC's Final Decision, as the conservation measures that will be implemented by the applicant and BLM to avoid, minimize, and offset the impacts to the tortoise associated with the BSPP project. We have provided additional clarification of the requirements outlined in BIO-8, BIO-9, BIO-10, and BIO-13 below. The project description, including the CEC's conditions of certification BIO-1 thru BIO-14, BIO-27, and BIO-28, and the additional clarifications provided below, provide the basis of the effects analysis provided in this biological opinion. The CEC's Final Decision (CEC 2010b) and BLM's final EIS (BLM 2010) include additional measures to offset proposed project impacts on rare and sensitive species and natural

communities, which will be implemented to further reduce impacts to biological resources, including those associated with dust, light, and noise, resulting from the proposed project.

BIO-8: Impact Avoidance and Minimization Measures – This CEC condition of certification specifies the measures that will be implemented to manage the project site and related facilities in a manner to avoid or minimize impacts to biological resources, including desert tortoises. To clarify, these measures will also be implemented during all ground-disturbing construction and O&M activities.

BIO-9: Desert Tortoise Clearance Surveys and Fencing - This CEC condition of certification specifies the procedures, including seasonal restrictions, for conducting tortoise clearance surveys and handling and moving tortoises out of the disturbance area during construction activities. In addition, this condition of certification specifies that once the area is cleared of tortoises, temporary tortoise exclusion fencing will be installed along linear features unless a biological monitor is present during construction activities. To clarify, these procedures for conducting tortoise clearance surveys, handling and moving tortoises out of the disturbance area, and ensuring tortoises do not re-enter the disturbance area will also be implemented during O&M activities along the access road/utility corridor, gen-tie transmission line ROW, and rerouted drainage channels outside of the plant site, and along the outer side of the perimeter security fence.

BIO-10: Desert Tortoise Relocation/Translocation Plan - This CEC condition of certification specifies that the Desert Tortoise Relocation/Translocation Plan will be consistent with Service-approved guidelines, and that the final Plan will include all revisions deemed necessary by BLM, Service, CDFG, and CEC. To clarify, the final Desert Tortoise Relocation/Translocation Plan will incorporate the Service's desert tortoise translocation guidance (Service 2010b) and subsequent project-specific guidance, as appropriate for the BSPP project, and must be approved by the Service prior to the initiation of any ground-disturbing construction activities associated with Phases 1b or 2 or prior to translocation of any desert tortoises found in Phase 1a, whichever occurs first.

BIO-13: Raven Management Plan - As stated in this CEC condition of certification, the applicant will submit payment to the project sub-account of the Renewable Energy Action Team (REAT) account held by the National Fish and Wildlife Foundation (NFWF) to implement a regional management plan for common ravens for the reduction of predation by the common raven on the desert tortoise in the California desert. Payment of this one-time fee is intended to mitigate for the proposed project's portion of the cumulative and indirect effects of contributing to the population increase of common ravens in the desert region. The account was established by the REAT agencies (BLM, CDFG, Service, and CEC) in coordination with NFWF to manage the funds that will be used to implement the regional management plan.

Based on the cost allocation methodology described in *Renewable Energy Development And Common Raven Predation on the Desert Tortoise –Summary* (May 2010) and *Cost Allocation Methodology for Implementation* of *the Regional Raven Management Plan* (July 9, 2010), the

applicant will contribute a one-time fee of $105 per acre of disturbance to 2,816 ha (6,958 ac) of desert tortoise habitat that will be impacted by the proposed project. Accordingly, a fee of $730,590 will be assessed to fund the project's portion of the regional management plan for the 30-year ROW grant by the BLM. Documentation for payment of this fee will be submitted to the Service no less than 10 days prior to the initiation of ground-disturbing construction activities.

Action Area

The implementing regulations to section 7(a)(2) of the Act describe the action area to be all areas affected directly or indirectly by the Federal action and not merely the immediate area affected by the proposed project (50 CFR §402.02). The action area is the area of potential direct or indirect effects of the proposed action and any interrelated or interdependent human activities; the direct and indirect effects of these activities include associated physical, chemical, and/or biological effects of considerable likelihood (Service and NMFS 1998). Indirect effects are those that are caused by the proposed action and are later in time but are still reasonably certain to occur (Service and NMFS 1986). Analyses of the environmental baseline, effects of the action on the species and designated critical habitat, cumulative effects, and the impacts of the incidental taking, are based upon the action area as determined by the Service (Service and NMFS 1998).

The action area for the proposed project consists of the 2,816 ha (6,958 ac) of desert tortoise habitat that will be impacted in the project site/footprint [includes the plant site and associated linear facilities (i.e., access roads, utility corridor, gen-tie transmission line, and construction power line]. Along linear facilities off the plant site, the action area also includes a distance of up to 500 m (1,640 ft) where any tortoises will be moved out of harm's way to avoid injury from construction or O&M-related activities. The action area also includes the applicant's proposed desert tortoise recipient (translocation) sites (McCoy Mountains and Upper McCoy Wash recipient sites) and all contiguous tortoise habitat within 12.6 km (7.8 mi) of the McCoy Mountains recipient site and the Upper McCoy Wash recipient site, as identified in the Relocation/Translocation Plan. By including habitat within 12.6 km (7.8 mi) of the recipient sites, we are including all areas that tortoises are likely to move to in the first year following translocation[2]. The action area also includes the applicant's proposed control site.

Finally, the action area encompasses future conservation areas that will be acquired to offset the loss of desert tortoise habitat resulting from construction and O&M of the proposed project. The acquisition, management, and monitoring of these conservation areas are expected to have only beneficial effects to tortoises; however, the locations of these conservation areas are currently unknown. As discussed in the condition of certification BIO-12 of the CEC's Final Decision, lands selected for acquisition will be within the Colorado Desert Recovery Unit (Service (2008) and contribute to desert tortoise habitat linkages and population connectivity within and between desert tortoise critical habitat, known populations of tortoises, and/or or other preserve lands.

[2] See "Effects of the Action" section for further discussion on movement distances of translocated tortoise.

Prior to the initiation of ground-disturbing construction activities, either conservation lands will be acquired directly by the applicant or the applicant will provide funding for the acquisition (see CEC condition of certification BIO-12).

The action area does not include the area where an artificial water source would be installed in the McCoy Mountains or nearby areas on BLM lands to compensate for impacts to desert bighorn sheep (*Ovis canadensis nelsoni*) (per BIO-21) because the exact location of this water source is currently unknown. Therefore, potential direct (e.g., habitat destruction) or indirect (e.g., increasing raven predation by providing a water source for ravens) impacts to tortoises resulting from construction and operation of this water source would be addressed in a separate consultation.

STATUS OF THE SPECIES/CRITICAL HABITAT

The following section summarizes information about the desert tortoise on the legal/listing status, distribution and population trends, current threats, and status of critical habitat as discussed in the Service's biological opinion on the California Desert Conservation Area Plan Amendment for the Coachella Valley (Service 2010a). Please refer to that document as well as the draft revised recovery plan (Service 2008) for additional detailed information about these topics and the species' description, life history, and habitat affinities.

Legal/Listing Status: The Mojave population of the desert tortoise was proposed for listing by the Service on October 13, 1989, and listed as a threatened species on April 2, 1990 (Service 1989, 1990). The tortoise is also listed as a threatened species under the California Endangered Species Act. The Service designated about 2.6 million ha (6.5 million ac) of critical habitat for the tortoise in portions of California, Nevada, Arizona, and Utah on February 8, 1994 (Service 1994b). The recovery plan was developed for this species in 1994 (Service 1994a). The draft revision to the recovery plan was developed in 2008 (Service 2008), but the plan has not yet been finalized.

Distribution and Population Trends: Typical desert tortoise habitat in the Mojave Desert is characterized as creosote bush scrub below 1,676 m (5,500 ft) in which precipitation ranges from 5 cm to 20 cm (2 in to 8 in), where a diversity of perennial plants is relatively high, and production of annual plants is high. The Mojave population of the desert tortoise includes those animals living north and west of the Colorado River in the Mojave Desert of California, Nevada, Arizona, and southwestern Utah, and in the Sonoran (Colorado) Desert in California.

The best available information indicates the Mojave population of desert tortoise is declining in abundance in most areas throughout its range. Line distance sampling is now being used as part of a long-term monitoring strategy to detect population trends. This program was put into place in 2001, but detecting population trends is expected to be a gradual process and surveys conducted over short periods of time (e.g., 2001 to 2007) would only reveal catastrophic declines or significant changes. These data do, however, provide some information on variability in

annual and regional densities between recovery units. In general, over the first 6 years of range-wide monitoring (2001-2005, 2007), tortoises were least abundant in the Northeast Mojave Desert Recovery Unit, the highest reported densities occurred in the Upper Virgin River Recovery Unit, and considerable decreases in density were reported in 2003 in the Eastern Colorado and Western Mojave recovery units (Service 2008). The proposed project occurs in the Eastern Colorado Desert Recovery Unit per the species recovery plan (Service 1994a), which was merged with the Northern Colorado Desert Recovery Unit in the draft revised recovery plan (Service 2008) and referred to simply as the Colorado Desert Recovery Unit.

Current Threats: The majority of threats to the tortoise and its habitat are associated with human land uses including urbanization, upper respiratory tract disease and possibly other diseases, predation by common ravens and domestic and feral dogs, unauthorized off-highway vehicles activity, authorized vehicular activity, illegal collecting, mortality on paved roads, vandalism, drought, livestock grazing, feral burros, nonnative plants, changes to natural fire regimes, and environmental contaminants.

Status of Critical Habitat: The Service designated about 2.6 million ha (6.5 million ac) of critical habitat for the tortoise in portions of California, Nevada, Arizona, and Utah. The primary constituent elements of desert tortoise critical habitat were identified as sufficient space to support viable populations within each of the six recovery units and to provide for movement, dispersal, and gene flow; sufficient quality and quantity of forage species and the proper soil conditions to provide for the growth of these species; suitable substrates for burrowing, nesting, and overwintering; burrows, caliche caves, and other shelter sites; sufficient vegetation for shelter from temperature extremes and predators; and habitat protected from disturbance and human-caused mortality.

The proposed project is more than 8 km (5 mi) northwest of the Chuckwalla critical habitat unit and is separated from this unit by the McCoy Mountains. Most critical habitat areas are relatively unaffected by human uses and continue to provide a habitat base to support viable populations into the future. However, threats from long-term climate trends, such as recurrent and prolonged drought, and ecological processes, such as invasive nonnative plant infestations and consequent wildfire risk, are widespread and have degraded and eliminated the primary constituent elements of desert tortoise critical habitat over large areas, which if continued, would threaten the viability of populations in affected areas, including habitat linkages between core populations.

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR §402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are the anticipated impacts of all proposed Federal projects in the action area that have undergone section 7 consultation, and the

impacts of State and private actions which are contemporaneous with the consultation in progress.

As discussed in the "Action Area" section above, the action area for this project includes: (1) the project area, defined as the 2,816 ha (6,958 ac) project footprint [includes the plant site and associated linear facilities (i.e., access roads, utility corridor, gen-tie transmission line, and construction power line)], and a distance of up to 500 m (1,640 ft) from linear facilities where any tortoises will be moved out of harm's way, (2) the proposed desert tortoise recipient (translocation) sites, and all contiguous tortoise habitat within 12.6 km (7.8 mi) of the McCoy Mountains site and the Upper McCoy Wash site, (3) the proposed control site, and (4) future conservation areas. The environmental baseline of each of these components of the action area is described below.

Species Abundance in the Action Area

Project Area

The project area is in the Eastern Colorado Desert Recovery Unit per the species recovery plan (Service 1994a), which was merged with the Northern Colorado Desert Recovery Unit in the draft revised recovery plan (Service 2008) and referred to simply as the Colorado Desert Recovery Unit. Specifically, the project area is located entirely on BLM-managed lands in the McCoy Valley, between the McCoy Mountains to the west and McCoy Wash to the east. The project area is mostly flat, with elevations ranging from about 204 m (670 ft) at the southwestern limit of the project to about 128 m (420 ft) near the southeastern project boundary. Several deep drainages occur in the western portion of the project area adjacent to the McCoy Mountains.

The project area is primarily undeveloped but contains several BLM-designated routes of travel (unmaintained roads). The I-10 freeway crosses the southern portion of the project area, where the gen-tie transmission line and buried gas line are proposed south of I-10. During World War II, the McCoy Valley was part of the General George S. Patton Desert Training Center, officially the California-Arizona Maneuver Area, a simulated theater of operations heavily used by tanks and other military vehicles. The nearby Blythe Airport, then known as Bishop Army Field, was used as a training field by the 46th Bomb Group, and later by the 34th Bomb Group, for flying training missions in a variety of military aircraft.

Despite these past military uses, vegetation in the McCoy Valley and in the project area, has been recovering through natural recruitment and today appears relatively undisturbed. The project area is dominated by creosote bush scrub and seven other vegetation communities and land cover types, including desert dry wash woodland, unvegetated ephemeral dry wash, creosote bush/big galleta grass, stabilized and partially stabilized desert dunes, agriculture, developed, and disturbed habitat (see Table 2 in AECOM (2010a) for acreages of each vegetation/land cover type occurring in the action area). Two invasive nonnative plants, Russian thistle (*Salsola tragus*) and Saharan mustard (*Brassica tournefortii*), occur in disturbed areas

throughout the project area, especially near roads and fallow or active agricultural areas. Another nonnative plant, Mediterranean grass (*Schismus barbatus*), is prevalent throughout the creosote bush scrub.

California Natural Diversity Database (CNDDB) records show desert tortoise occurrences surrounding (but not within) the project site (AECOM 2010a), the nearest being approximately 0.32 km (0.2 mi) from the project footprint (CDFG 2009 cited in AECOM 2010a). Surveys conducted along the eastern end of the proposed DPV2 transmission line project, including the CRS substation, in 2005, 2008, and 2010 (Alice Karl and Associates *et al.* 2005, BioResource Consultants 2008, AECOM 2010b), located tortoises and sign, with the closest live tortoise being observed approximately 21 km (13 mi) west of the BSPP site. Two live tortoises and sign were also observed in 2007 approximately 3 km (2 mi) southeast of the planned CRS substation (CFWO GIS database).

Initial surveys of the plant site and re-routed drainage channels, gen-tie transmission line, access roads/utility corridor, and temporary construction power line were conducted in spring and fall 2009 following the Service's pre-project survey protocol (Service 1992). Surveys (not protocol) were also conducted within a 2-km (1-mi) zone (survey zone) around the plant site. Following the identification of an alternative site configuration and various design refinements related to potential transmission line routes and substation location, protocol surveys (Service 1992) were conducted in spring 2010 in areas of the project footprint and proposed alternative site configuration that were not previously surveyed in 2009.

A total of six desert tortoises were observed during the 2009 and 2010 pre-project surveys, of which two were found in the project footprint [one in the southwest corner of the plant site and one 91 m (300 ft) from the utility corridor] and four were found in the survey zone west of the project footprint (AECOM 2010b, AECOM 2010c). Additionally, numerous observations of tortoise sign were recorded during these surveys, most of which were observed in the western portions of the project footprint and adjacent survey zone, and included 120 burrows [of which 15 were active (showing sign of recent use) and four were occupied], 172 pallets or shallow depressions under low shrubs (of which 12 were Class 1 or 2), 55 scat (of which 13 were Class 1 or 2), 42 carcasses, and 449 observations of bone fragments (AECOM 2010b, AECOM 2010c). The presence of five active burrows, nine fresh scat, two widely spaced cover sites with eggshell fragments (indicating the potential for hatchings, at least two female tortoises) found in the project footprint, and the presence of four tortoises in the survey zone, suggests that more tortoises than the two observed males likely occur in the project footprint.

To estimate the number of tortoises in the project footprint, we applied the method for estimating tortoises described in the 2010 survey protocol (Service 2010c). This calculation yields an estimate of four subadult or adult tortoises in the project footprint, but indicates that two tortoises likely were undetected: one tortoise because it was underground and another tortoise because it escaped detection. This estimate is based on an 80 percent probability that a tortoise is above ground based on the previous winter rainfall and a 63 percent probability of detecting a tortoise if

above ground (see Service 2010c). The Service's method for estimating tortoise numbers (Service 2010c) also allows us to calculate a 95 percent confidence interval used to indicate the reliability of the data. However, since the information required to perform this calculation (i.e., total length and number of transects walked) was not provided, we are unable to calculate the 95 percent confidence interval associated with the estimate and therefore, cannot determine the reliability of the estimate.

We also estimated the number of subadult and adult tortoises in the project footprint by applying density estimates for areas outside of Desert Wildlife Management Areas (DWMAs) and critical habitat within the Eastern Colorado Desert Recovery Unit, as determined in our amended biological opinion for the California Desert Conservation Area (CDCA) Plan for the Northern and Eastern Colorado Desert (NECO) Coordinated Management Plan amendment (Service 2007). As discussed in our amended biological opinion for the NECO amendment to the CDCA Plan (Service 2007), to derive the density of tortoises outside of DWMAs and critical habitat in the Eastern Colorado Desert Recovery Unit, we multiplied the average density of tortoises in the recovery unit by 0.1, resulting in a density estimate of 0.7 tortoises per square km (1.8 tortoises per square mi). We estimated the density of tortoises within the DWMAs and critical habitat in the recovery unit based on an average of the densities for the recovery unit from line-distance sampling conducted between 2001 and 2005 (Service 2006). We considered areas outside of DWMAs and critical habitat to support lower densities of tortoises based on numerous factors, including elevation, rainfall, vegetation community composition, and other geographic variables that naturally support fewer animals where habitat conditions are not as favorable as with DWMAs and critical habitat. Based on habitat quality and the very low numbers of desert tortoises found using protocol surveys in the project footprint, and the results of several surveys for other projects along the I-10 corridor, we conclude the 0.7 tortoises per square km density estimate is a reasonable approximation for the project footprint, as well, and constitutes the best available information. Applying this density of 0.7 tortoises per square km (1.8 tortoises per square mi) to the project footprint yields an estimate of 20 subadult and adult tortoises.

Applying these two methods, we anticipate that from 4 to 20 subadult and adult tortoises may be present in the project footprint. We acknowledge that the estimate of four tortoises likely is an underestimate, based on the type and amount of tortoise sign found in the project area and the adjacent survey zone, and that the estimate of 20 tortoises likely is an overestimate since it is based on our assumptions of tortoise densities outside of DWMAs and critical habitat. However, we determined that applying the estimate of 20 tortoises in the project footprint would provide a biologically conservative approach based on the best data available to establish a baseline for analysis of the potential impacts of the proposed project.

In addition to subadult and adult tortoises, the project footprint is likely to contain juvenile tortoises. Estimating densities of hatchling and juvenile tortoises is difficult because they are extremely difficult to detect due to their small size and cryptic nature. However, based on a 4-year study of their population ecology, Turner *et al.* (1987) determined that juveniles accounted for 31 to 51 percent of the overall population. Using this range and the estimated 20 subadult and adult tortoises that could be found in the project footprint, we estimate that the project

footprint may support from 6 to 10 juveniles. We recognize that the survey data used for these estimates come from a limited number of studies and that population levels are constantly changing. We also recognize that since our estimate of the number of subadult and adult tortoises in the project footprint is likely an overestimate (as discussed above), this estimate of juveniles in the project footprint is likely an overestimate as well, but provides the best available data available to establish a baseline for analysis.

We also expect the proposed project footprint contains tortoise eggs. Estimating the number of tortoise eggs is also extremely difficult given that the eggs are buried beneath the soil surface. To estimate the number of eggs that could be present, we used the average number of eggs found in a clutch (i.e., 5.8, see Service 1994a). Assuming a 1:1 sex ratio, 10 of the 20 tortoises estimated in the project footprint may be reproductive females that together could produce approximately 58 eggs per year. However, it is difficult to estimate the number of females or eggs within the project footprint based on the low number of tortoises found during the pre-project surveys. Given the number of assumptions and extrapolations used to estimate the number of eggs [i.e., that 20 tortoises may occur on site and that 10 of those 20 may be female and equally reproductive as the tortoises in the Turner *et al.* (1984) study area], we determined that the estimate of 58 eggs on the project site has an unknown but high level of uncertainty, and therefore, does not provide a useful measure for analyzing the effects of the proposed project. Therefore, we cannot calculate a reliable estimate for the number of eggs that may be impacted by the proposed project.

The concentration of tortoise sign in the western portion of the project footprint and adjoining area is consistent with the assessment of generally higher quality habitat for tortoises in the same area, likely due to proximity to the McCoy Mountains and greater availability of water and forage associated with related drainages (AECOM 2010a). The reduced amount of tortoise sign on the eastern side of the project footprint and along the transmission line corridor south of I-10 is consistent with the assessment of lower-quality habitat in these areas. This habitat quality gradation is consistent with the recent U.S. Geological Survey (USGS) tortoise habitat model (Nussear *et al.* 2009). Based on the model, habitat quality is ranked from 0-1, with 1 representing high quality habitat. Values in the project area range from 0.4 to 0.6 (along the westernmost edge of the project area), to 0.3 and below (low quality) for the rest of the project area (AECOM 2010a).

Despite the lower-quality habitat in the eastern portion of the project footprint and transmission line corridor, any portion of the project footprint may be used by tortoises for dispersal from surrounding habitat (AECOM 2010a). Desert tortoises are known to use lower-quality intermountain habitat, such as on eastern parts of the project footprint, as dispersal routes, providing passage between high-quality habitat areas in the surrounding mountains (Averill-Murray and Averill-Murray 2005). Historically, tortoise populations in the Sonoran Desert have exchanged individuals at a rate of one migrant per generation (Averill-Murray and Averill-Murray 2005).

Proposed Recipient (Translocation) Sites

Recipient sites must be sufficiently large to accommodate and maintain the resident (if present) and translocated desert tortoises, as well as be free of disease (Service 2010b). In addition, identification of at least two recipient sites is necessary in case resident tortoises at the primary site are determined to be infectious. Tortoises translocated from the plant site would be translocated to the McCoy Mountains (primary site) or Upper McCoy Wash (secondary site) recipient sites. If infectious tortoises are present at the primary site, tortoises from the project site will be translocated to the secondary site, after resident tortoises at that site have been determined to be free of disease. The exact locations and boundaries of these two recipient sites will be identified in the final Relocation/Translocation Plan that will be finalized and approved by the Service before the initiation of any ground-disturbing construction activities (see "Conservation Measures" section above). No designated critical habitat occurs in or near the McCoy Mountains or Upper McCoy Wash recipient sites; therefore, none will be adversely affected.

The McCoy Mountains recipient site will be in the McCoy Valley on BLM-managed lands and adjacent to the McCoy Mountains Bighorn Sheep Wildlife Habitat Management Area (WHMA). No ROW or utility corridors currently exist, and future demand is not anticipated in this recipient site. Though two BLM-designated routes of travel (unmaintained roads) traverse the recipient site, the proposed project will block access to the recipient site from these routes. The McCoy Valley area historically has received lower levels of recreational use, and such use is not anticipated to increase substantially in the future. Habitat value for desert tortoises in this area is similar to the higher quality habitat on the western portion of the project area and therefore is expected to fulfill the feeding, breeding, sheltering requirements of translocated tortoises. The recipient site is within a proposed solar study area in BLM's Solar Energy Study Area Maps published in June 2009 as part of the public scoping process for the Solar Energy Development Programmatic EIS, which would be prioritized for solar development if this EIS is approved. However, due to the presence of several deeply incised washes, we believe the recipient site is likely impractical for future additional solar development. For the reasons discussed above, the REAT agencies assume future conflicting uses are unlikely to be proposed or approved that would impact desert tortoises at this recipient site.

The Upper McCoy Wash recipient site will be on BLM-managed lands in the upper McCoy Wash area, approximately 16 to 32 km (10 to 20 mi) north of the project area, and adjacent to designated wilderness protected from future development. The site will be chosen to avoid, to the extent possible, existing ROW or utility corridors or designated routes of travel, or areas where future demand is anticipated. The upper McCoy Wash area historically has received lower levels of recreational use, and such use is not anticipated to increase substantially in the future. Habitat value for desert tortoises in this area overall is similar to the higher quality habitat on the western portion of the project area and therefore is expected to fulfill the feeding, breeding, and sheltering requirements of translocated tortoises. The upper McCoy Wash area is not within a proposed solar study area in BLM's Solar Energy Study Area Maps published in

June 2009 as part of the public scoping process for the Solar Energy Development Programmatic EIS, which would be prioritized for solar development if the EIS is approved. For the reasons discussed above, the REAT agencies assume future conflicting uses are unlikely to be proposed or approved that would impact desert tortoises at this recipient site.

In the absence of site-specific information and for the reasons described above, we applied the same 0.7 tortoises per square km (1.8 tortoises per square mi) density to estimate tortoise density at these recipient sites as we did to estimate the density of tortoises on the project footprint. Applying this density yields an estimate of five tortoises at the approximately 688-ha (1,700-ac) McCoy Mountains recipient site (i.e., 0.7 tortoises per square km multiplied by 6.9 square km). For the Upper McCoy Wash recipient site, we anticipate that the site will be up to approximately 1,214 ha (3,000 ac), equating to roughly to the amount of higher quality habitat on the western side of the proposed project site. While we expect that some tortoises may be found in the eastern side of the project footprint, we anticipate that the majority of the tortoises found on site will be found in the higher quality habitat on the western side due to the presence of more productive, higher quality habitat. Therefore, we determined that a recipient site of roughly this same size should provide adequate area for feeding, breeding, and sheltering for translocated tortoises. Applying this density yields an estimate of eight tortoises at the approximately 1,214 ha (3,000 ac) Upper McCoy Wash recipient site (i.e., 0.7 tortoises per square km multiplied by 12 square km). However, as discussed above, we acknowledge that this estimate is likely an overestimate but provides a biologically conservative approach based on the best data available to establish a baseline for analysis of the potential impacts of the proposed project.

Proposed Control Site

To provide "control" baseline data from which to compare the effectiveness of translocation as a project minimization measure, the same number of translocated tortoises monitored will also be monitored at a control site. The exact location of the control site will be identified in the final Relocation/Translocation Plan that will be approved by the Service before the initiation of any ground-disturbing construction activities (see "Conservation Measures" section above). The control site will be within the upper McCoy Wash area described above. Per the Service's translocation guidance (Service 2010b), the control site will (1) be equivalent in habitat type/quality and tortoise population size/structure as its respective recipient site, (2) not have previously received translocated tortoises, and (3) be at least 10 km (6 mi) from either recipient site to prevent the interaction of control, resident, and translocated tortoises. Once the exact location is identified, tortoise density at the control site will be estimated prior to the initiation of translocation activities to ensure that the control site contains the appropriate number of tortoises for monitoring purposes. The control site will be used to monitor resident tortoises only; no tortoises from the project footprint will be translocated to the control site. No designated critical habitat occurs in the upper McCoy Wash where the control site is anticipated to be located; therefore, none would be adversely affected.

Future Conservation Lands

Habitat acquisition is proposed to offset impacts to tortoise habitat resulting from the proposed project. As part of the proposed project, conservation lands will be acquired within the Colorado Desert Recovery Unit as described in the species' draft revised recovery plant (Service 2008) [includes the Eastern and Northern Colorado Desert Recovery Units as identified in the species' original recovery plan (Service 1994a)]. While the location of these lands has not yet been determined, the REAT agencies have agreed that privately-owned lands will be acquired to benefit tortoise habitat linkages and population connectivity within and between tortoise critical habitat units, known populations of tortoises, and/or or other preserve lands in the Colorado Desert Recovery Unit (BIO-12). These future conservation lands will be conserved and managed in perpetuity for tortoises. Using available data on landownership and willing sellers, the Service has determined that a sufficient amount of privately owned desert tortoise habitat exists within the Colorado Desert Recovery Unit that will be available for acquisition.

The abundance of tortoises in future conservation areas is unknown since the specific areas have not yet been identified. However, because acquisition will focus on areas connected to lands with tortoise habitat equal to or better quality than the project footprint (BIO-12), we anticipate that these future conservation lands will contain suitable habitat that is currently occupied or likely to be occupied in the future.

Factors Affecting the Species Environment within the Action Area

Project Area

Due to the lack of development, tortoises in the majority of the project area (particularly the portion north of I-10) are not now impacted by extensive habitat loss or degradation. However, the tortoises are impacted to some extent by several unmaintained roads, invasive nonnative plants, and potentially by predation from common ravens foraging, nesting, and roosting along existing transmission lines south of the action area (south of I-10) and from common ravens nesting elsewhere in the vicinity.

The southern portion of the project area that includes the gen-tie transmission line crosses I-10 and then runs along an existing utility corridor that contains several existing or authorized transmission lines, and will contain the planned CRS substation and DPV2 transmission line. The existing transmission lines include the Devers to Palo Verde No. 1 and Blythe Energy lines. The Service issued biological opinions exempting take of several species, including the tortoise, associated with the Blythe Energy line in 2005, and exempting take of the tortoise associated with the Desert Southwest line in 2006 and is nearing completion of formal consultation on the potential impacts of the DPV2 line on tortoises. The Blythe Energy line was recently completed but construction on the Desert Southwest line has not yet been initiated.

The Service issued a programmatic biological opinion evaluating the effects of BLM's CDCA plan amendment for the NECO Plan on tortoises in 2002 and as amended in 2005 and 2007. The programmatic biological opinion exempted take for causal uses (recreation, mining, and vehicle use), livestock grazing, and removal of burros that BLM authorizes through approval of the CDCA Plan. Projects outside of these categories require separate consultation.

Issuance of biological opinions for the Blythe Energy and Desert Southwest transmission lines, and shortly for the DPV2 transmission line, has allowed or may allow for additional take of tortoises and degradation of tortoise habitat in the project footprint, primarily where the gen-tie line will parallel these existing and future lines in the utility corridor adjacent to I-10. Operations and maintenance activities associated with these existing and future transmission lines may also affect species populations in the project area. Issuance of the biological opinion for activities covered under the NECO Plan allows for additional take of tortoises along the designated routes of travel (unmaintained roads) in the project area.

Proposed Recipient (Translocation) Sites

The general area of both recipient sites is undeveloped and therefore not impacted by extensive habitat loss or degradation. However, both sites may be impacted to some extent by invasive nonnative plants, and the McCoy Mountains site may be impacted by predation from common ravens foraging, nesting, and roosting along existing transmission lines south of the action area (south of I-10) and from common ravens nesting elsewhere in the project vicinity.

Proposed Control Site

The exact location of the proposed control site in the upper McCoy Wash area has not yet been determined. The majority of this area is undeveloped and therefore not impacted by extensive habitat loss or degradation.

Future Conservation Areas

While the location of these lands has not yet been determined, privately owned lands will be acquired to benefit tortoise habitat linkages and population connectivity within and between tortoise critical habitat units, known populations of tortoises, and/or other preserve lands in the Colorado Desert Recovery Unit in the BLM's NECO bioregional planning unit (BIO-12). These future conservation lands will be conserved and managed in perpetuity for tortoises.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat that would be added to the environmental baseline, along with the effects of other activities that are interrelated or interdependent with that action. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification.

Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur. In contrast to direct effects, indirect effects can often be more subtle, and may affect species and habitat quality over an extended period of time, long after project activities have been completed. Indirect effects are of particular concern for long-lived species such as the tortoise, because project-related effects may not become evident in individuals or populations until years later.

Methodology

Permanent versus Temporary Impacts

Since full recovery of vegetation in the desert can take decades or longer, we consider all ground-disturbing impacts associated with the BSPP project to be permanent. Vasek *et al.* (1975) found that in the Mojave Desert transmission line construction and O&M activities result in a permanently devegetated maintenance road, enhanced vegetation along the road edge and between tower sites, and reduced vegetation cover under the towers, which recovered significantly but not completely in about 33 years. Based on a quantitative review of studies evaluating post-disturbance plant recovery and success in the Mojave and Sonoran Deserts, Abella (2010) found that reestablishment of perennial shrub cover (to amounts found on undisturbed areas) generally occurs within 100 years but fewer than 40 years in some situations. He also found that vegetation recovery times are likely impacted by a number of variables, including but not limited to climate, invasion by nonnative plants, and level of ongoing disturbance. Based on these factors, we consider temporary impacts to be equivalent to permanent impacts for the purposes of our effects analysis relative to the 30-year life of the project.

A total of approximately 2,816 ha (6,958 ac) of tortoise habitat would be directly impacted by construction and O&M activities associated with the proposed project (Table 1). As discussed in the "Description of the Proposed Action" section above, we do not anticipate additional impacts to habitat during O&M activities outside of what would be impacted during construction. The conservation measures included as part of the project description would help avoid, minimize, and offset impacts to tortoises resulting from construction and O&M activities.

As discussed in the "Environmental Baseline" section above, we estimate that up to 20 subadult and adult tortoises, up to 10 juveniles, and an unquantifiable number of eggs could occur in the project footprint. We also estimate that up to 13 subadult and adult tortoises could occur in both recipient sites combined. All of these individuals could be directly and indirectly impacted by the proposed project.

Direct Effects

Death and Injury

Construction and O&M

Death or injury of tortoises could result from collisions with or crushing by vehicles or heavy equipment, including crushing of individuals that take shelter under parked vehicles and are killed or injured when the vehicle is moved. Desert tortoises could also be injured or killed after being trapped in pipes or construction excavations. Other direct effects could include individual tortoises or their eggs being crushed or buried in burrows during construction and O&M-related activities. Because of increased human presence in the area or injured or killed due to encounters with workers' or visitors' pets, desert tortoises may be collected or vandalized. Desert tortoises may also be attracted to the construction area by application of water to control dust, placing them at higher risk of death or injury.

To minimize the death and injury of tortoises residing in or entering the construction or O&M disturbance areas (e.g., the plant site, linear facilities, and rerouted channels), the applicant would implement the general and species-specific conservation measures proposed as part of the project. Accordingly, take of tortoises would be minimized by the presence of a Designated Biologist during ground-disturbing construction and O&M activities in the project footprint (BIO-2 and BIO-11). As specified in the CEC's condition of certification BIO-1, the Designated Biologist must meet the Service's Authorized Biologist qualifications and be approved by the Service prior to the initiation of ground-disturbing construction activities. Death or injury of tortoises during construction would also be minimized by demarcation of all sensitive biological resource areas by the Designated Biologist (BIO-2). Death or injury of tortoises would be further minimized during construction and O&M activities by demarcation of all work area boundaries prior to ground-disturbing activities, limiting vehicular and equipment traffic to existing routes of travel, and designing and installing all project components off the plant site (e.g., access roads, storage and parking areas, pulling sites, and rerouted channels) to minimize impacts to native plant communities and sensitive biological resources (BIO-8).

Construction activities on the majority of the 2,768-ha (6839-ac) plant site would be conducted during the species' more active period as described in the project description and in the Relocation/Translocation Plan, thereby maximizing the potential to locate and move tortoises out of the disturbance area during construction of Phases 1b and 2. Construction of Phase 1a is proposed to begin during the species' less active season. However, the Phase 1a area includes areas of the project footprint containing a lower density of tortoise sign, and no live tortoises, active burrows, or fresh scat or tracks. Therefore, we anticipate that few, if any, tortoises likely occur in this area. However, death or injury of tortoises due to construction of any of the three phases would be minimized by the requirement for the Designated Biologist to conduct preconstruction clearance surveys of the project area prior to construction and either relocate individuals out of harm's way or translocate individuals to the recipient site as outlined in the

Service-approved Relocation/Translocation Plan, following Service-approved methods (BIO-9 and BIO-10).

Construction and O&M disturbance areas cleared of tortoises would be either enclosed with tortoise exclusion fencing or monitored by the Designated Biologist or Biological Monitors trained by the Designated Biologist to prevent individuals from re-entering the disturbance area (BIO-3, BIO-8, and BIO-9). Installation of the tortoise exclusion fencing around the plant site would preclude tortoises from re-entering or leaving if not found and removed during clearance surveys. During construction and O&M, breaches in the exclusionary fencing may allow tortoises to pass through the barrier and be affected by project-related activities. However, these potential effects would be minimized by the requirement to conduct at least two clearance surveys of the project footprint and regularly inspect all permanent and temporary tortoise exclusion fencing, and repair damage to all temporary and permanent fencing immediately (BIO-9).

Any tortoises overlooked by the initial clearance surveys may be detected during construction activities by routine site inspections by the Designated Biologist (BIO-2) or incidental observations by construction workers. The Worker Environmental Awareness Program would be administered to all onsite personnel and be repeated annually for all permanent personnel and within 1 week of arrival to any new construction personnel (BIO-6). This training would enhance the effectiveness of onsite personnel detecting tortoises during construction and O&M activities, and either avoiding them or ensuring they are properly relocated.

The posting and enforcement of specified speed limits and inspections underneath parked vehicles (BIO-8) would further reduce the risk to any tortoises that inadvertently venture onto the roadway during construction or O&M activities. To reduce the likelihood of tortoises in construction areas being trapped in pipes, trenches, or other excavations and being injured or killed, all pipes greater than 8 cm (3 in) stored close to the ground and all excavations would be covered, fenced, or backfilled, and inspected by the Designated Biologist (BIO-2 and BIO-8). To reduce the likelihood of tortoises being attracted to construction areas by application of water to control dust, the minimal amount of water needed would be applied to dirt roads and construction areas, and a Biological Monitor would patrol those areas to ensure water does not puddle (BIO-8).

Overall, we expect that death and injury of most subadult and adult tortoises would be avoided during construction and O&M activities through compliance with the conservation measures. However, since tortoise eggs and juveniles are difficult to detect, we anticipate that an unknown number of eggs and juveniles occurring in the project footprint would be killed or injured due to construction and O&M activities. We do not expect loss of eggs or juveniles in the project footprint would affect the species local population level since early life stages naturally suffer higher mortality rates and are not as important to the long-term conservation of the species as are adults.

Capture, Handling, and Relocation/Translocation

In addition to construction and O&M-related activities, accidental death and injury could result from capturing, handling, and moving tortoises for the purposes of relocating or translocating them out of the project footprint. Accidental death and injury could result from (1) stress or disease transmission associated with handling tortoises, (2) stress associated with moving individuals outside of their established home range, (3) stress associated with artificially increasing the density of tortoises in an area and thereby increasing competition for resources, and (4) disease transmission from translocated individuals to residents. Capture and handling of translocated, resident, and control tortoises for the purposes of disease testing and monitoring could also result in accidental death or injury from handling to conduct visual health assessments, draw blood for ELISA testing, and secure transmitters.

We anticipate that the applicant would capture and relocate or translocate most subadult and adult desert tortoises from harm's way in the project footprint. Because of the difficulty in locating juvenile desert tortoises or eggs, the applicant may find and move some but not all juvenile desert tortoises or eggs from the project footprint. Depending on where in the plant site tortoises are found, some individuals would be moved relatively short distances [i.e., less than 500 m (1,640 ft)] but likely still within their home range, and others would be moved farther [i.e., more than 500 m (1,640 ft)], outside of their existing home range.

Capturing, handling, and moving tortoises for the purposes of translocating them out of the project footprint may result in accidental death or injury if these methods are performed improperly, such as during extreme temperatures, or if tortoises void their bladders and are not rehydrated. Averill-Murray (2001) determined tortoises that voided their bladders during handling had lower overall survival rates (0.81-0.88) than those that did not void (0.96). If multiple tortoises are handled by biologists without the use of appropriate protective measures and procedures, such as reused latex gloves, pathogens may be spread among individuals. Walde *et al.* (2008) found that the differences in reproduction among translocated, resident, and control desert tortoises were "not likely to be statistically significant" in a study of tortoises at Fort Irwin.

Translocated tortoises may suffer a higher potential for mortality following release when they are moved into unfamiliar territory, and are less likely to have established cover sites for protection prior to home range establishment. Studies have documented various sources of mortality for translocated individuals, including predation, exposure, fire, disease, and flooding (Nussear 2004, Field *et al.* 2007, Berry 1986, U.S. Army 2009 and 2010). The degree to which tortoises move after translocation depends on whether they are released into typical or atypical habitat; that is, if the recipient area supports habitat similar to that of the source area, tortoises are likely to move less (Nussear 2004). In one study, the majority of dispersal movement away from the release site occurred during the first 2 weeks after translocation (Field *et al.* 2007). However, Field *et al.* (2007) and Nussear (2004) showed translocated tortoises appear to reduce movement

distances following their first post-translocation hibernation to a level that is not significantly different from resident populations.

Mean straight-line dispersal distances of adult translocated tortoises (males and females) reported by Nussear (2004, Figures 2 and 4) were approximately 1 km (0.6 mi), 1.5 km (0.9 mi),1.8 km (1.1 mi), 3.5 km (2.2 mi), and 6 km (3.7 mi). Walde *et al.* (2008) reported mean straight-line dispersal distances of adult translocated tortoises using two experimental treatments being 2.6 km (1.6 mi) and 4.2 km (2.6 mi) for males and 1.5 km (0.9 mi) and 2.3 km (1.4 mi) for females. In both of these studies, the mean straight-line dispersal distances were for translocated tortoises released over 500 m (1,640 ft) from their original point of origin.

Maximum straight-line dispersal distances for translocated male tortoises range from 6.2 km (3.9 mi) to 23 km (14.3 mi) in the first year following translocation (Field *et al*. 2007, Walde *et al*. 2008). Maximum straight-line dispersal distances for translocated males at each site reported in these studies ranged from approximately 6.2 km (3.9 mi) (Field *et al*. 2007) to 7.3 km (4.5 mi), 7.4 km (4.6 mi), 11.3 km (7.0 mi), 11.6 km (7.2 mi), and 12.6 km (7.8 mi) (Walde *et al*. 2008). In both of these studies, the maximum straight-line dispersal distances were for translocated male tortoises released over 500 m (1,640 ft) from their original point of origin.

We consider the 23 km (14 mi) dispersal distance likely represents an outlier since only one male tortoise moved this far, roughly twice the distance of the other translocated tortoises. Removing this outlier, the maximum straight-line dispersal distances for males would be 12.6 km (7.8 mi). Based on these data, which constitute the best available scientific and commercial data at this time, we determined that the majority of tortoises translocated long distances [greater than 500 m (1,640 ft)] may disperse up to approximately 12.6 km (7.8 mi) from the release point in first year following release. Since female tortoises were found to move shorter distances than males following translocation (Field *et al*. 2007, Walde *et al*. 2008), the 12.6 km (7.8 mi) distance captures the maximum straight-line dispersal distance of translocated females as well.

Tortoises translocated shorter distances [i.e., less than 500 m (1,640 ft)] are not likely to move as far following release as tortoises moved longer distances. Walde *et al*. (2008) found that maximum straight-line dispersal distance for male tortoises was approximately 1.5 km (0.9 mi) in the first year following translocation.

In a study conducted in Ivanpah Valley, 21.4 percent of 28 translocated tortoises died (Field *et al.* 2007). Other studies have documented mortality rates of 0, 15, and 21 percent in other areas (Nussear 2004), though this study found that mortality rates among translocated desert tortoises was not statistically different from that observed in resident populations. Because Nussear (2004) did not compare mortality rates in resident populations to those in control groups, we cannot determine if the translocation caused increased mortality rates in the resident population. Recent work on translocation associated with the expansion of Fort Irwin (U.S. Army 2009 and 2010) compared the mortality rates associated with resident and translocated populations with that of the control populations and indicated translocation did not increase mortality above

natural levels (Esque *et al.* 2010). This and other fieldwork indicate that tortoise mortality is most likely to occur in the first year after release. After the first year, translocated individuals are likely to settle into new home ranges and mortality is likely to decrease.

Desert tortoises from the BSPP site would be moved into areas already supporting resident tortoises. As a result, there could be increased competition for forage, especially during drought years. Increased tortoise densities may lead to increased inter-specific encounters and thereby increase the potential for spread of disease, potentially reducing the health of the overall population. Increased tortoise densities also may lead to increased competition for shelter sites and other limited resources or increased incidence of aggressive interactions between individuals (Saethre *et al.* 2003). Therefore, recipient sites must be sufficiently large to accommodate and maintain the resident and translocated desert tortoises (Service 2010b). Based on our current estimates of the resident population densities in the recipient sites [i.e., 0.7 tortoises per square km (1.8 tortoises per square mi)] as discussed in the "Environmental Baseline" section, we calculated the maximum allowable final density[3] at the recipient sites. Based on this calculation, no more than 58 tortoises [4] and 108 tortoises [5] can be translocated from the project footprint to the McCoy Mountains site or Upper McCoy Wash site, respectively. Since we estimate that no more than 20 subadult and adult tortoises will be found in the project footprint, translocation of individuals from the project site to either recipient site is not likely to impact the current density of the recipient site. Based on site-specific survey information, if the recipient sites prove to be too small, the applicant would be required to identify a new recipient area for the additional desert tortoises. This action would constitute a significant change in the project description and would likely require re-initiation of consultation.

Translocation has the potential to increase the prevalence of diseases, such as upper respiratory tract disease, in a resident population. Physiological stresses associated with handling and movement or from density-dependent effects could exacerbate this threat if translocated individuals with subclinical upper respiratory tract disease or other diseases begin to exhibit clinical signs of disease due to the stresses associated with handling and movement. This potential conversion of translocated desert tortoises from a non-contagious to contagious state may increase the potential for infection in the resident population above pre-translocation levels.

Following the Service's translocation guidance (Service 2010b), translocated tortoises from the plant site would be assessed for the presence of disease prior to translocation. For tortoises on the plant site that would be moved less than 500 m (1,640 ft), only visual health assessments would be conducted. For tortoises found on the plant site that would be moved greater than 500 m (1,640 ft) to the recipient site, visual health assessments and blood draw for ELISA testing

[3] Defined as 130 percent of the mean density detected in the respective recovery unit (Service 2010b). Mean density in the Eastern Colorado Desert Recovery Unit is estimated to be 7 desert tortoise per square km (18.1 desert tortoise per square mi) based on line-distance sampling conducted between 2001 and 2005 (Service 2006).

[4] Calculated as 6.9 square km recipient site multiplied by 9 desert tortoise per square km [130 percent multiplied by the mean density of the recovery unit (7 desert tortoise per square km)]

[5] Calculated as the 12 square km recipient site multiplied by 9 desert tortoise per square km [130 percent multiplied by the mean density of the recovery unit (7 desert tortoise per square km)]

would be conducted. In addition, visual health assessments and blood draw for ELISA testing would be conducted on an equivalent number of resident tortoises at the recipient site and control site. We cannot precisely predict how many tortoises would require blood draw since the final number depends on the total number of tortoises translocated, the number of tortoises translocated greater than 500 m (1,640 ft), and the actual (versus estimated) number of resident tortoises in the recipient site. However, we anticipate a maximum of 60 tortoises may require blood draw (up to 20 from the plant site, up to 20 resident[6] tortoises from the recipient site, and up to 20 tortoises at the control site).

Following the Service's translocation guidance (Service 2010b), an equal number of translocated, resident, and control tortoises should be monitored for at least 5 years. Therefore, the 60 tortoises anticipated to require blood draw for the purposes of translocation also will carry transmitters and be regularly monitored and handled annually for health assessments and blood draw for ELISA testing. Some potential exists that handling of desert tortoises for the purposes of conducting health assessments and monitoring may cause elevated levels of stress that may render these animals more susceptible to disease or dehydration from loss of fluids.

As discussed above, translocated tortoises have been found to disperse up to approximately 12.6 km (7.8 mi) from the release point in first year following release, though tortoises are likely to move shorter distances if habitat at the recipient site is similar to that of the source area. To minimize the risk associated with long-distance dispersal and potential contact between translocated tortoises and diseased resident tortoises, the Service recommends that health assessments and blood draw for ELISA testing is performed on a sample of the resident tortoises within the 12.6 km (7.8 mi) dispersal area to determine disease prevalence within the population. However, for the purposes of the proposed project, we have determined that ELISA testing is not necessary for resident tortoises within the 12.6 km (7.8 mi) dispersal area associated with either recipient site. Our determination is based on the assumption that tortoises translocated from the plant site are likely to remain closer to their release point due to the presence of similar, or better quality, habitat than that on the plant site and are therefore, less likely to come into contact with diseased resident tortoises.

As discussed in the "Environmental Baseline" section, both recipient sites will be located within areas of similar, or better quality, habitat to that found on the western portion of the project area, where we anticipate finding the majority of the tortoises. Availability of water, forage, and cover sites appears to be higher on the western portion of the project area and the recipient sites due to their proximity to the mountains. However, if post-translocation monitoring reveals that tortoise translocated over 500 m (1,640 ft) from the plant site to the recipient site become infected, then a sample of resident tortoises within the 12.6 km dispersal area would be tested to determine disease prevalence before additional tortoises would be translocated to that recipient site.

[6] As discussed in the "Environmental Baseline" section, we estimate that up to five tortoises may occur in the McCoy Mountains recipient site and up to eight tortoises may occur in the Upper McCoy Wash recipient site. Therefore, our estimate that 20 resident tortoises at the recipient site may require blood draw would cover any additional tortoise up to 20 found during surveys of these recipient sites.

We cannot reasonably predict the increase in disease prevalence within the resident population that may occur due to translocation. However, the following mitigating circumstances are likely to reduce the magnitude of this threat: (1) the applicant would use experienced biologists and approved handling techniques that are unlikely to result in substantially elevated stress levels in translocated animals, (2) desert tortoise on the plant site are currently part of a continuous population with the resident populations of the primary recipient site (McCoy Mountains) and are likely to share similar pathogens and immunities, (3) some of the translocated desert tortoise would be translocated a relatively short distance, which is likely to reduce post-translocation stress associated with long-distance movements, (4) density-dependent stresses are unlikely to occur for the reasons discussed above, (5) any animal that either has clinical signs of disease or tests ELISA-positive would not be translocated, and (6) monitoring of translocated individuals would be implemented to determine the prevalence of disease transmission.

Because ELISA testing can result in false-positive results (i.e., an animal may test positive even though it is not a carrier of the disease), the potential exists for removal of healthy individuals from the translocated population due to concern over disease. These individuals would not be released into the wild and would no longer contribute to the environmental baseline for the action area. Because the applicant would coordinate with the Service and perform follow-up testing of ELISA-positive individuals, the potential for removing false-positive individuals from the translocated population is low. Consequently, we conclude that few, if any, desert tortoises will be incorrectly removed from the population due to false positive results. Similarly, some of the animals that test positive may have survived past disease infections and are healthy. Though our understanding of disease ecology is not complete and removal of these individuals from the wild population could eliminate individuals with superior fitness and genetic adaptations for surviving disease from the gene pool, the low numbers of tortoises involved likely would not be large enough to affect population genetics in the wild.

In conclusion, we do not anticipate that relocating tortoises out of harm's way, but less than 500 m (1,640 ft) from the point of capture, will result in death or injury because these individuals would be moved a relatively short distance and they would remain near or within their home range. Since relocated tortoises typically remain within their home range, we do not anticipate additional significant social or competitive impacts to resident tortoises in the area. However, following release of tortoises translocated outside of their home range, we anticipate a small number may die due to predation, exposure, disease, or competition. We anticipate most of this mortality is likely to occur in the first year after release, during the period that translocated animals are making long-distance movements and attempting to establish new home ranges. In addition, we anticipate that a small number of resident tortoises at the recipient site may die due to predation, exposure, disease, or competition. However, we cannot determine if mortality rates in the resident or translocated populations will be above natural mortality levels for the recipient site. In addition, the potential impacts of capturing, handling, and moving tortoises for the purposes of relocation or translocation would be minimized by the requirement for experienced biologists to handle all tortoises following Service-approved guidelines and relocate individuals out of harm's way or translocate individuals to the recipient site as outlined in the Relocation/

Translocation Plan (BIO-9 and BIO-10). In addition, as outlined in the Relocation/Translocation Plan, translocated tortoises would be monitored, findings reported to the Service, and adaptive management strategies implemented, as needed.

Habitat Loss

To offset permanent losses of 2,816 ha (6,958 ac) of tortoise habitat, a total of 2,816 ha (6,958 ac) of equivalent or better quality habitat would be acquired to benefit tortoise habitat connectivity and habitat linkages between tortoise critical habitat, known populations of tortoises, and/or other preserve lands in the Colorado Desert Recovery Unit in the BLM's NECO bioregional planning unit (BIO-12). These future conservation lands will be conserved and managed in perpetuity for tortoises.

Native shrubs and annual plants used by tortoises for sheltering and feeding adjacent to the project footprint also may be adversely affected by introduced or previously naturalized invasive nonnative plants (also referred to as weeds) that respond positively to ground disturbing activities. Project equipment may transport invasive nonnative plants into the project area where they may become established. Additionally, the potential introduction of noxious weeds may lead to increased wildfire risk (Brooks *et al.* 2003). However, potential degradation of habitat due to spread of invasive nonnative plants would be avoided and minimized by measures outlined in the Weed Management Plan designed to prevent the introduction of any new weeds and the spread of existing weeds as a result of project construction and O&M (BIO-14).

Indirect Effects

Human activities may provide food in the form of trash and litter or water that attracts tortoise predators such as the common raven. Ravens capitalize on human encroachment and expand into areas where they were previously absent or in low abundance. Ravens habituate to human activities and are subsidized by the food and water, as well as roosting and nesting resources that are introduced or augmented by human encroachment. The nearby Blythe airport and other urban areas provide food, water features, and roosting/nesting substrates (buildings, signs, lamps, and utility poles) that otherwise would be unavailable. Small mammal, fox, coyote, rabbit, lizard, snake, and tortoise road kill along I-10 and other roads provide additional attractants and subsidies for opportunistic predators/scavengers. Road killed wildlife would increase with project construction and O&M traffic, further exacerbating the raven/predator attractions and increasing tortoise predation levels.

Facility infrastructure such as power poles, fencelines, buildings, and other structures on the project site could also provide perching, roosting, and nesting opportunities for ravens. Natural predation rates may be altered or increased when natural habitats are disturbed or modified. Common raven populations in some areas of the Mojave Desert have increased 1,500 percent from 1968 to 1988 in response to expanding human use of the desert (Boarman 2002). Since ravens were scarce in the Mojave Desert prior to 1940, the existing level of raven predation on

juvenile tortoises is considered an unnatural occurrence (BLM 1990). In addition to ravens, feral dogs have emerged as significant predators of tortoises in rural residential areas. Though feral dogs may range several miles into the desert and have been found digging up and killing tortoises (Service 1994a, Evans 2001), we are not aware of any reports of feral dogs in the project area.

To minimize the generation of food and water subsidies due to construction and O&M-related activities, all trash materials would be disposed of in self-closing containers and removed daily to prevent the attraction of tortoise predators to the project footprint, road-killed animals would be immediately removed from the project footprint, and the minimal amount of water needed would be applied to dirt roads and construction areas to avoid standing water, with a Biological Monitor patrolling those areas to ensure water does not puddle (BIO-8). Also, increases in raven abundance in the project area would be minimized by measures outlined in the Raven Monitoring, Management, and Control Plan (Raven Plan) which include a program to monitor raven presence in the project vicinity, would determine if raven numbers are increasing, and would implement raven control as needed based on monitoring (BIO-13). The Raven Plan would also address raven monitoring and control at the proposed artificial water source in the McCoy Mountains to minimize impacts to bighorn sheep resulting from the BSPP project (BIO-21). To further minimize indirect and cumulative impacts of raven predation on tortoises associated with the proposed project, the applicant would contribute to the Service's Regional Raven Management Program (BIO-13) developed to address raven predation on tortoises at a population scale in the California Desert region as a conservation action for the species.

In addition, desert tortoise behavior may be impacted by increased noise levels and the presence of full-time facility lighting during construction and operation of the facility over a 30-year period. While we do not have data demonstrating the effect of increased noise levels and the presence of artificial lighting to desert tortoise behavior, several measures proposed to minimize these potential impacts on other sensitive species (BIO-8) will also benefit tortoises.

Given that the proposed construction of the plant site would result in the loss of a 2,768-ha (6,839-ac) block of habitat, the project may also impact tortoises by disrupting movement of individuals to habitat north and south of the project site. For gene flow to occur reliably across the range, populations of tortoises need to be connected by occupied areas of habitat that contain sustainable numbers of tortoises. Desert tortoise distribution and population genetic studies provide evidence that individual tortoises breed with their neighbors, those tortoises breed with their neighbors on the other side, and so on. Removal of 2,768 ha (6,839 ac) of tortoise habitat from the area between I-10 and the upper McCoy Wash area, where tortoises have been reported, may further limit movement of tortoises, though habitat would remain west and east of the project boundaries to provide for some level of connectivity to the upper McCoy Wash after construction of the proposed project.

Effect on Recovery

Per section 2(b), the primary purposes of the Act are to provide a means whereby the ecosystems upon which listed species depend may be conserved, and to provide a program for the recovery of listed species. Per section 2(c), Congress established a policy requiring all Federal agencies to use their authorities in seeking to recover listed species in furtherance of the purposes of the Act. Consistent with these purposes and Congressional policy, sections 3(5), 4(f), 7(a)(1), and the implementing regulations (50 *Code of Federal Regulations* § 402.02) to section 7(a)(2), and related preamble at 51FR19926 through 51FR19957, generally require Federal agencies to further the survival and recovery of listed species in the use of their authorities.

Pursuant to these mandates, our analysis below assesses (1) whether the proposed action adequately offsets its adverse effects to the environmental baseline to the desert tortoise, and (2) the extent to which the proposed action would cause "significant impairment of recovery efforts" or adversely affect the "species' chances for survival to the point that recovery is not attainable" (51FR19934).

The applicant would implement numerous measures to avoid, minimize, reduce, and offset the adverse effects to the relatively few tortoises in the project footprint. Overall, we expect that 20 or fewer subadult and adult and 10 or fewer juvenile desert tortoises would be captured, injured, or killed during construction of the solar facility, and that an unquantifiable number of eggs may be moved or destroyed during construction. Few tortoises of any size would be killed or injured during O&M of the facility. We expect that most subadult and adult tortoises encountered during work activities would be either moved short distances out of harm's way or translocated. Because the BLM and applicant would implement a variety of measures to reduce stress to these animals, we do not anticipate that injury or mortality would result from the handling and relocation of these animals.

We do not anticipate that loss of habitat in the project footprint would substantially reduce the ability of the tortoise to survive and recover in the wild because the recovery plan (Service 1994a) and final rule for designation of critical habitat for the species (Service 1994b) primarily focuses long-term conservation priorities in higher value habitat areas. The proposed acquisition of 2,816 ha (6,958 ac) of tortoise habitat would benefit tortoise habitat connectivity and habitat linkages between tortoise critical habitat, known populations of tortoises, and/or or other preserve lands in the Colorado Desert Recovery Unit in the BLM's NECO bioregional planning unit.

Based on the results of studies discussed above, most of the subadult and adult tortoises moved from the project footprint likely would continue to survive and reproduce at the location they are moved to (i.e., in adjacent habitat or the recipient site). Consequently, we anticipate that the proposed project would not appreciably diminish the reproductive capacity of the species, particularly in light of the relatively few tortoises that would be affected.

The distribution of the tortoise would be minimally reduced due to long-term disturbance associated with the proposed action because the proposed project would result in loss of a small percentage of the habitat in the Eastern Colorado Desert Recovery Unit [which includes the 413,022-ha (1,020,600-ac) Chuckwalla critical habitat unit, a majority of the approximately 404,685.64 ha (1,000,000 ac) Joshua Tree National Park, and additional lands]. This percentage does not constitute a substantial portion of the recovery unit. Given the location of the proposed project in an area near the edge of the tortoise's range, we do not anticipate that the amount of habitat to be lost because of the proposed project would reduce the distribution of the tortoise to an appreciable degree.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, local, private, or certain tribal actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The Service is not aware of any future State, local, private, or certain tribal actions that are reasonably certain to occur in the action area.

CONCLUSION

After reviewing the current status, environmental baseline for the action area, effects of the proposed action, and cumulative effects of the desert tortoise, it is the Service's biological opinion that the proposed action is not likely to jeopardize the continued existence of desert tortoises. We base this decision on the following:

1. The applicant will implement numerous measures to ensure that most tortoises are moved out of the project footprint and injury and death of tortoises is minimized (i.e., clearance surveys, exclusion fencing, relocation, translocation, and qualified tortoise biologists).

2. The applicant will implement measures to reduce the potential for increased predation by common ravens, both in the vicinity of the project footprint and regionally, and to reduce the spread of invasive nonnative plants in the project area.

3. Current information from permanent study plots and line distance sampling does not document a statistical trend in adult tortoise densities in the Eastern Colorado Desert Recovery Unit. Nonetheless, given the small number of tortoises affected by the proposed project, we have no information to indicate that development of the proposed project would appreciably reduce the tortoise population levels in this recovery unit.

4. Few, if any, tortoises are likely to be injured and killed as a result of relocation or translocation.

5. Though the proposed project would reduce the amount of available tortoise habitat in the McCoy Valley and thereby result in a loss of habitat connectivity in the McCoy Valley between the Chuckwalla and Chemehuevi DWMAs, sufficient habitat would remain to the west and east of the proposed project to provide connectivity of tortoises in the McCoy Valley in the long term. Relocation of some tortoises into habitat adjacent to the project area, and translocation of some tortoises to a recipient site either adjacent to the project or in the upper McCoy Wash, will increase tortoise numbers in those areas. Successful translocation would minimize these effects by allowing those tortoises to remain in the population and contribute towards recovery of the species.

6. Compensation requirements through BLM, CDFG, and CEC will result in an increase in the quantity and quality of habitat managed for the conservation of the tortoise.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act, and Federal regulation pursuant to section 4(d) of the Act, prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below for desert tortoises are non-discretionary and must be undertaken by the BLM so that they become binding conditions of any grant or permit issued to the applicant/permittee, as appropriate, for the exemption in section 7(o)(2) to apply. The BLM has a continuing duty to regulate the activity covered by this incidental take statement. If the BLM (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant/permittee to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. To monitor the impact of incidental take, the BLM must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

AMOUNT AND EXTENT OF TAKE

We anticipate that the number of desert tortoises that may be taken would be low due to the small number of individuals found within the project footprint and the anticipated effectiveness of conservation measures described as part of the proposed action. However, quantifying the precise number of individuals that may be incidentally taken is not possible because this species is cryptically colored to avoid predation, and spends the majority of its life inhabiting burrows to avoid environmental extremes or predation, making the observation or detection of death or injury difficult. In addition, population numbers fluctuate in response to weather patterns and other biotic and abiotic factors, and population levels and the distribution of individual animals have changed since the species surveys were completed and are anticipated to continue changing over the 30-year life of the project. The number of tortoise eggs and juveniles is even more difficult to quantify because of small size, in addition to the other reasons discussed above. As a result, finding dead or injured individuals within the project area is difficult as individuals may be crushed or buried underground in burrows that were not found or inspected, and otherwise hard to recognize/detect for the reasons discussed above. Because eggs and juveniles are almost never found during clearance surveys, we assume virtually all these early life forms will be killed or injured by construction and O&M activities within the project footprint.

While we cannot provide the precise number of desert tortoises that may be taken, we have estimated the number of subadult and adult tortoises in the project footprint based on the best available information, and based on this estimate have established take thresholds that, if exceeded, will trigger reinitiation of consultation.

Take of desert tortoises is anticipated and exempted as follows:

- The disturbance of up to 2,816 ha (6,958 ac) of habitat from construction and O&M-related activities may result in accidental death or injury of tortoise eggs, juveniles, subadults or adults from crushing, trampling, or burial. If the project impacts more than this acreage of tortoise habitat, the take threshold will be exceeded.

- As discussed in the "Environmental Baseline" section above, we estimate that up to 20 subadult and adult tortoises, up to 10 juveniles, and an unquantifiable number of eggs could occur in the project footprint. While we cannot quantify the precise numbers of tortoises that may be killed or injured as a result of construction or O&M activities for the reasons discussed above, we anticipate the number of subadult and adult tortoises that may be killed or injured will be small because relatively few tortoises (2 individuals) were found during surveys, which indicates an apparently small population in the project footprint, and because most tortoises will be found during pre-project clearance surveys. Therefore, using our best professional judgment in light of best available information, we anticipate that construction of the proposed project will result in the incidental take of two individuals, and that O&M activities will result in incidental take of two individuals per year. However, based on the difficulty of detecting individual tortoises, we anticipate

each report of incidental taking likely represents the actual death or injury of two (2) tortoises. As a result, we anticipate no more than one (1) tortoise may be reported dead or injured from construction and no more than one (1) per year may be reported dead or injured from O&M activities. Thus, if more than one (1) tortoise is found injured or dead during construction activities, and more than one (1) tortoise per year is found injured or dead during O&M activities, the take threshold will be exceeded.

- Take of up to 20 subadult and adult tortoises, up to 10 juveniles, and an unquantifiable number of eggs due to trapping, capture, or collection for the purposes of relocation or translocation from within the project construction and O&M disturbance area. Because the capture, relocation, and release will be conducted by a Service-approved Biologist and, therefore, is not expected to result in direct injury or death of any relocated/ translocated tortoises, we do not want to limit the ability of the Service-approved Biologist to avoid and minimize the direct injury or death of tortoises by relocating/ translocating tortoises found during preconstruction clearance surveys. Thus, all take in the form of trapping, capture, or collection for the purposes of relocation is exempted for any eggs, juveniles, or subadult or adult tortoises found during clearance surveys, monitoring activities, or other incidental observations, subject to the reasonable and prudent measures and terms and conditions below. If any tortoises are directly injured or killed during relocation or translocation, the take threshold will be exceeded.

- All take, in the form of capture or collection of subadult and adult tortoises each in the resident and control population for monitoring. Although these tortoises from the translocated population may be captured multiple times over the course of the post-translocation monitoring effort, we do not anticipate injury or mortality of these individuals due to post-translocation monitoring.

- Take in the form of trapping, capture, or collection of up to sixty (60) subadult and adult tortoises (up to 20 translocatees from the plant site, up to 20 resident tortoises at the recipient site, and up to 20 tortoises at the control site) will be taken, in the form of capture or collection, for the purposes of blood draw to assess disease prevalence. Although such an invasive procedure presents some likelihood that individuals could be injured or killed, we do not anticipate that blood collection will result in the mortality of any individuals because blood draw will be conducted by Service-approved Biologists, following Service-approved methods. If any tortoises are directly injured or killed for the purposes of drawing blood, the take threshold will be exceeded.

IMPACT OF THE INCIDENTAL TAKING ON THE SPECIES

In the accompanying biological opinion, the Service determined that these levels of anticipated take are not likely to result in jeopardy or adversely affect the recovery of the tortoise.

REASONABLE AND PRUDENT MEASURES

The BLM and applicant are implementing conservation measures for this project as part of the proposed action to minimize the taking of desert tortoises. The Service's evaluation in the biological opinion includes consideration of the conservation measures developed by the BLM and applicant to reduce the adverse effects of the proposed project on this species. Any subsequent changes in the conservation measures proposed by BLM or applicant or in the conditions under which these activities currently occur may constitute a modification of the proposed action and may warrant reinitiation of formal consultation, as specified at 50 *Code of Federal Regulations* § 402.16. These reasonable and prudent measures are intended to supplement the protective measures that were proposed by BLM and applicant as part of the proposed action, and are necessary and appropriate to minimize the impact of the taking on desert tortoises.

- The applicant shall monitor and report the level of incidental take of desert tortoises to the CFWO throughout the life of the project and report on the effectiveness of the project minimization measures to reduce the impact of incidental take of tortoises.

TERMS AND CONDITIONS

To be exempt from the prohibitions of section 9 of the Act, the BLM and applicant, and all agents/contractors must comply with the following terms and conditions, which implement the reasonable and prudent measures described above, and are intended to minimize the impact of the incidental taking. These terms and conditions are non-discretionary.

The following term and condition implements the reasonable and prudent measure above.

a) The applicant shall prepare and provide to the Service and BLM an annual report by December 31 of each year of the project. The annual report shall document but not be limited to, the following:

    - Compliance with project-specifications and conservation measures outlined in this biological opinion, including BIO-1 thru BIO-14, BIO-27, and BIO-28 outlined in the CEC's Commission Decision on the BSPP project (CEC 2010b), as they relate specifically to tortoises.

    - Any activities determined by the Designated Biologist or Biological Monitors to be out of compliance with project-specifications and conservation measures outlined in this biological opinion and the corrective measures implemented to bring the project back into compliance.

- The total amount and location of tortoise habitat disturbed by construction and O&M activities during the reporting year.

- The number and location of tortoises killed or injured during project construction or O&M activities during the reporting year and a description of the circumstances leading to the death or injury of individuals of the species.

- Activities conducted under the Desert Tortoise Relocation/Translocation Plan (BIO-10) during the reporting year, including but not limited to, the number and location of tortoise eggs, hatchlings, juveniles, subadults, or adults located during project activities and relocated or translocated during preconstruction, construction, and/or O&M activities during the reporting year and a detailed description of the relocation/translocation activities, and a detailed description of monitoring activities conducted at the recipient and control sites during the reporting year.

  If more than 20 adult tortoises, or any eggs, hatchlings, juveniles or subadults are found within the project footprint, the Designated Biologist shall immediately report the observation to the CFWO, prior to any relocation/ translocation activities. The CFWO will review the information to determine its consistency with the effects analysis above and if relocation/translocation of additional tortoises would benefit their survival and be consistent with our assumptions in the biological opinion, and if reinitiation of consultation is warranted.

- Activities conducted under the Raven Management Plan (BIO-13) during the reporting year, including but not limited to, the results of raven nest monitoring and removal of raven nests and offending ravens.

- Activities conducted under the Weed Management Plan (BIO-14), including but not limited to, invasive plant species control activities conducted during construction or O&M activities in the project disturbance area during the reporting year and the status of control activities conducted the previous year.

Disposition of Sick, Injured, or Dead Specimens

The CFWO is to be notified immediately at (760) 431-9440 if any desert tortoises are found sick, injured, or dead in the action area. Immediate notification means verbal (if possible) and written notice within 1 workday, and must include the date, time, and location of the carcass, and any other pertinent information. Care must be taken in handling sick or injured individuals to ensure effective treatment and care and in handling dead specimens to preserve biological material in the best possible state.

The CFWO should also be notified immediately at (760) 431-9440 if any endangered or threatened species not addressed in this biological opinion is found dead or injured in the project footprint during the life of the project. The same reporting requirements also shall pertain to any healthy individual(s) of any threatened or endangered species found in the action area and handled to remove the animal to a more secure location.

Reporting Requirements

Please refer to the "Terms and Conditions" section above for details on reporting procedures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that the BLM work with the applicant and Service to determine if the transmittered desert tortoises associated with the translocated populations can be used to answer additional research questions related to translocation or desert tortoise biology.

2. We recommend that the BLM amend the California Desert Conservation Area Plan to prohibit additional renewable energy development (e.g., solar energy facilities, wind development) within the unused portion of the 3,804-ha (9,400-ac) ROW granted for construction and O&M of the BSPP project, particularly within the proposed McCoy Mountains recipient site. We offer this recommendation because this area is likely to be used as a recipient site for translocated desert tortoises from the BSPP project. Additionally, we are aware of two other ROW applications filed with the BLM for development of large-scale solar facilities directly north of the BSPP project (NextEra's McCoy and EnXco's McCoy Soleil projects). Given these proposed projects, the potential exists that desert tortoise habitat adjacent to the McCoy Mountains may be disturbed and fragmented to the extent that desert tortoises and other wildlife populations in the area may be severely compromised.

3. We recommend that the BLM amend the California Desert Conservation Area Plan to prohibit additional renewable energy development (e.g., solar energy facilities, wind development) within the upper bajadas (mapped as "dissected fans" on the NECO Map 3-4, Landforms) in the mountains of northeastern Riverside County. We offer this recommendation because this action would protect the higher quality tortoise habitat in the CDCA plan area. At a minimum, we recommend that BLM prohibit or limit development in the upper bajadas of the McCoy Mountains (mapped as "dissected fans" on the NECO Map 3-4, Landforms) to protect the higher quality tortoise habitat in the region and prevent

isolating the proposed McCoy Mountains recipient site in light of potential future large-scale solar development.

4. We recommend that the BLM ensure that the gen-tie transmission line associated with the BSPP project also is adequate to provide for transmission of electricity from the two other solar projects proposed for construction directly north of the BSPP project: NextEra's McCoy and EnXco's McCoy Soleil projects. Use of a shared gen-tie transmission line through the BSPP project footprint will reduce, and perhaps negate, the need for additional gen-tie transmission lines to the west or east of the BSPP site and thereby, reduce additional destruction/degradation of desert tortoise habitat in these adjacent areas, including the McCoy Mountains recipient site where tortoises translocated from the project footprint may be released.

REINITIATION NOTICE

This concludes formal consultation on the proposed project for the desert tortoise. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

If you have any questions regarding this document, please contact Tannika Engelhard at the Carlsbad Fish and Wildlife Office at (760) 431-9440, extension 202.

Attachments:
Table 1 Estimated acreage of desert tortoise habitat permanently and temporarily impacted by construction of the proposed Blythe Solar Power Project.
Figure 1 Blythe Solar Power Project Location
Figure 2 Blythe Solar Power Project Site Plan

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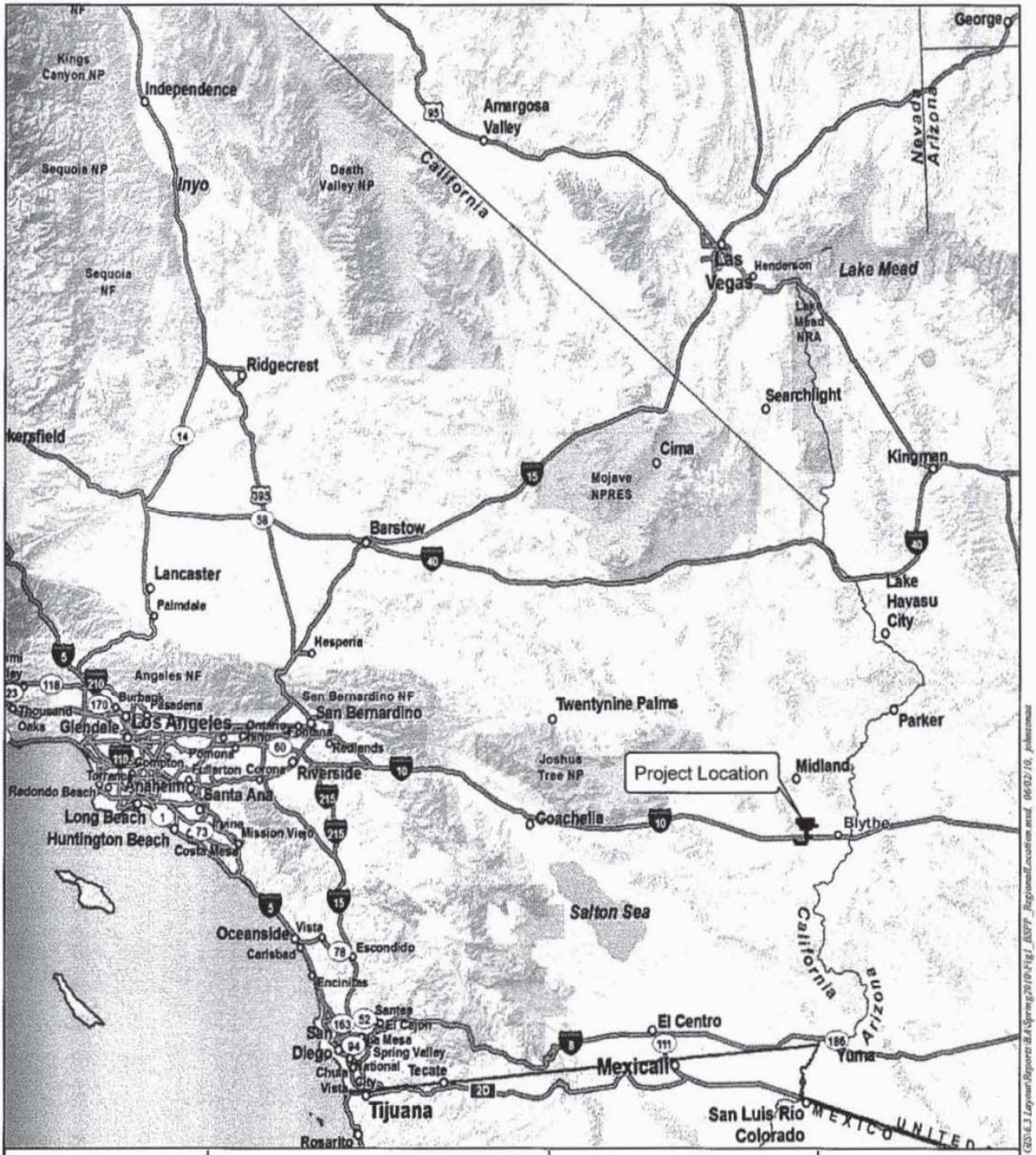
Kings Canyon NP
Independence
Sequoia NP
Inyo
Death Valley NP
Amargosa Valley
California
Nevada
Arizona
George
Las Vegas
Henderson
Lake Mead
Lake Mead NRA
Sequoia NF
Ridgecrest
Searchlight
Bakersfield
Cima
Kingman
Mojave NPRES
Barstow
Lancaster
Palmdale
Lake Havasu City
Hesperia
Angeles NF
San Bernardino NF
San Bernardino
Burbank
Pasadena
Thousand Oaks
Glendale
Los Angeles
Ontario
Chino
Fontana
Redlands
Pomona
Compton
Fullerton
Corona
Riverside
Torrance
Anaheim
Santa Ana
Redondo Beach
Long Beach
Huntington Beach
Irvine
Mission Viejo
Costa Mesa
Twentynine Palms
Parker
Joshua Tree NP
Project Location
Midland
Goachella
Blythe
Salton Sea
Oceanside
Vista
Carlsbad
Escondido
Encinitas
Santee
El Cajon
La Mesa
Spring Valley
San Diego
Chula Vista
National City
Tecate
Tijuana
Rosarito
El Centro
Mexicali
Yuma
San Luis Rio Colorado
MEXICO
UNITED
Map Location
OR
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1 inch = 40 miles
0
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80
Miles
N
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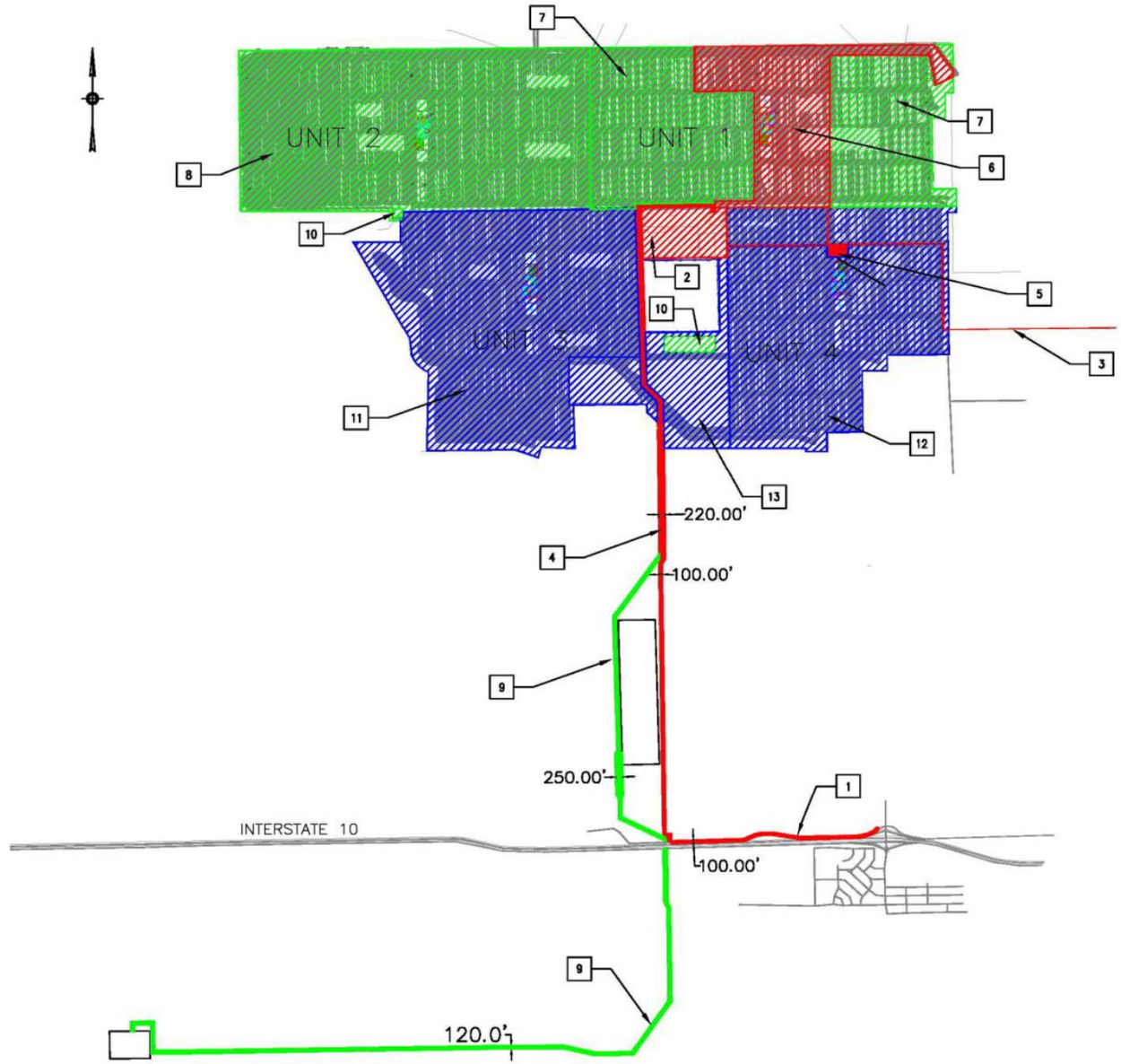
Source: ESRI; AECOM 2010
Blythe Solar Power Project
Biological Assessment
Figure 1
Regional Map
AECOM
Date: June 2010

Table 1. Estimated acres (ac) and hectares (ha) of desert tortoise habitat that will be permanently and temporarily impacted by construction of the proposed Blythe Solar Power Project.

Vegetation Communities and Other Cover Types	Power Plant Site[1]	Access Roads[2]	Gen-Tie Transmission line[3]	Shared Gen-Tie/Utility Corridor[4]	Temporary Construction Power[5]	Total[6]
Creosote Bush/Big Galleta Grass Association	365.13	0	4.78	0.91	0	371
Desert Dry Wash Woodland	197.08	10.76	3.78	1.32	0	213
Unvegetated Ephemeral Dry Wash	8.55	0	0	0.11	0	9
Creosote Scrub Brush	6,268.50	1.40	28.65	65.21	0.83	6,365
Total[6]	6,839 ac (2,768) ha	12 ac (5 ha)	37 ac (15 ha)	68 ac (28 ha)	1 ac (0.40 ha)	6,958 ac (2,816 ha)

[1] Calculated as the total amount of habitat that will be permanently and temporarily impacted by construction of the power plant site, perimeter security fence, and rerouted drainage channels outside of the perimeter security fence.
[2] Calculated as the total amount of habitat that will be permanently and temporarily impacted due to improvements to Black Rock Road and construction of the new access road to the power plant site.
[3] Calculated as the total amount of habitat that will be permanently and temporarily impacted within the gen-tie transmission line alignment due to construction of the transmission line (including crossing structures, pole pads, crane pads, pulling/splicing sites, spur roads, and access road) outside of the shared gen-tie utility corridor.
[4] Calculated as the total amount of habitat that will be permanently and temporarily impacted within the shared gen-tie and utility corridor due to construction of the gen-tie transmission line and buried telecommunications and natural gas lines (including crossing structures, pole pads, crane pads, and pulling/splicing sites).
[5] Calculated as the total amount of habitat that will be permanently and temporarily impacted due to construction of the temporary construction power line (either buried or overhead) up to the fenced power plant site (including trenching area, crossing structures, pole pads, crane pads, pulling/splicing sites, and new access road).
[6] Totals rounded to the nearest whole number.



PLAN VIEW

SCALE: NTS

LEGEND

- PHASE 1A DISTURBANCE
- PHASE 1B DISTURBANCE
- PHASE 2 DISTURBANCE

DISTURBED AREA PHASE 1A			
ITEM	DESCRIPTION	AREA (ACRES)	DURATION (MONTHS)
1	**BLACK ROCK ROAD**	17.3	APPROXIMATELY 7 MONTHS
2	SHARED FACILITIES	123	
3	**CONSTRUCTION POWER**	11.7	
4	**UTILITIES CORRIDOR**	102.4	
5	**WATER WELL**	3.28	
6	UNIT 1	515	
	SUB TOTAL	772.68 ACRES	
DISTURBED AREA PHASE 1B			
7	REMAINDER OF U. 1	1185	APPROXIMATELY 30 MONTHS
8	UNIT 2	1708	
9	**GEN–TIE**	115	
10	**LAND TREATMENT UNIT**	16	
	SUB TOTAL	3024 ACRES	
DISTURBED AREA PHASE 2			
11	UNIT 3	1495	APPROXIMATELY 32 MONTHS
12	UNIT 4	1342.14	
13	CONSTRUCTION AREA	390.68	
	SUB TOTAL	3227.82 ACRES	
TOTAL		7024.5 ACRES	

NO.	DATE	REVISION	BY	APP.	APP.	FINAL UPDATE	NOTES
1	05/17	DISTURBANCE SKETCH (1814 ACRES)					
2	05/19	REDUCED TOTAL DISTURBED AREA (910 ACRES)					
3	06/30	ADDED PHASE 1B AND 2					
4	07/02	REVISED AREAS					

DESCRIPTION | COST ACCOUNT

CONSTRUCTION APPROVAL

APPROVAL	DATE

SCALE: AS SHOWN	DATE
DESIGNED BY	07/02/10
DRAWN BY	
CHECKED BY	
APPROVED BY	
APPROVED BY	

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OAKLAND, CALIFORNIA 94612

Solar Millennium LLC

JOB NO. | DWG NO. BSPP–200–201 | REVISION R–4

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APPENDIX 3

Endangered Species Action Section 7(d) Memorandum

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United States Department of the Interior

BUREAU OF LAND MANAGEMENT
California State Office
2800 Cottage Way, Suite W-1623
Sacramento CA 95825
www.ca.blm.gov

In Reply Refer To:

On April 22, 2014, the request of the Bureau of Land Management (BLM) to reinitiate consultation on Modified Blythe Solar Power Project (Modified Project) Proposed Amendment to Right-of-Way (ROW) Grant CACA 048811was received by the U.S. Fish and Wildlife Service (USFWS). On May 23, 2014, the BLM provided the USFWS with the additional information it requested, including information on Yuma clapper rail. Pursuant to section 7(d) of the Endangered Species Act (ESA), once the formal consultation process has started, a federal agency may make no irreversible or irretrievable commitment of resources that could preclude the formulation or implementation of reasonable and prudent alternatives (RPA) to avoid jeopardizing the continued existence of listed species or destroying or modifying critical habitat.

Due to project scheduling, including activities related to desert tortoise mitigation measures, there has been a request from the Modified Project Applicant for the BLM to sign the Record of Decision (ROD) and authorize a limited suite of project-related construction activities prior to the receipt of an amended Biological Opinion (BO) from the USFWS. In response to this request, the BLM assessed the potential that issuing the ROD approving the amendment of the existing ROW grant for the project and authorizing limited activities under a Notice to Proceed (NTP) – including construction of tortoise fencing, construction of access roads, tortoise clearance consistent with USFWS protocol, reactivation of an existing groundwater well, geotechnical exploration, and limited staking and surveying related to these activities prior to the conclusion of the consultation process – would violate section 7(d) of the ESA. For the reasons set forth below, we conclude the contemplated actions would not violate Section 7(d). The analysis is as follows and addresses each of the species relevant to the consultation process for the modified Project:

Yuma Clapper Rail

During the spring of 2013 and 2014 Yuma clapper rail mortality was documented at two large-scale PV projects in California. The first mortality was documented at the First Solar Desert Sunlight facility located approximately 33 miles west of the Modified Project, while the second mortality was documented at the Solar Gen 2 facility over 50 miles southwest of the Modified Project, south of the Salton Sea. As a result of the reported mortalities attributable to the two solar development projects, the BLM included in its reinitiation of consultation request for the Modified Project a request for concurrence with the BLM's determination that the Modified Project may affect but was not likely to adversely affect (NLAA) Yuma clapper rail.

The definition of NLAA includes those effects which are insignificant, discountable or beneficial, with the concept of discountable effects being those that are expected to be extremely unlikely to occur, unmeasurable, undetectable, or not subject to evaluation. Given that the Modified Project does not include aquatic habitat for Yuma clapper rail, it is not located in a flight path that would connect aquatic features, and no Yuma clapper rail were observed on or over the Project site during project-specific resource surveys, the BLM determined that it is extremely unlikely that Yuma clapper rail would occur within the Modified Project area and subsequently be affected by the project; and therefore, any potential effects were discountable, hence BLM's NLAA.[1] Additionally, it should be noted that on July 20, 2012,

[1] It should also be noted that conservation measures in the Final EIS to reduce the impacts to bird species generally (e.g., marking fencing) would reduce the potential for impact to Yuma clapper rail.

the BLM completed consultation with the USFWS on the Solar Programmatic EIS, which assessed the impact of the Solar Energy Program on federally listed species. As part of that consultation, the USFWS concurred with the determination that solar energy development within the identified Solar Energy Zones (SEZ) was not likely to adversely affect Yuma clapper rail. Since the Modified Project is located entirely within the Riverside East SEZ, it was reasonable for the BLM to reach a similar conclusion with respect to the Modified Project.

On July 30, 2014, the USFWS provided its concurrence with BLM's NLAA determination for Yuma clapper rail. As result of USFWS' concurrence with the NLAA, the Yuma clapper rail will not be addressed in the amended BO, and therefore does not need to be considered as part of this 7(d) analysis.

Desert Tortoise

The project was previously approved as a 1,000 megawatt (MW) concentrating solar thermal energy generating project by the BLM and the California Energy Commission (CEC) in 2010 (the Approved Project). A BO for the Approved Project was issued by the U.S. Fish and Wildlife Service on October 8, 2010 (FWS-ERIV-09B0186-10F08800). In the 2010 BO, the USFWS determined the project was not likely to jeopardize the continued existence of desert tortoise based on the following:

1. The applicant will implement numerous measures to ensure that most tortoises are moved out of the project footprint and injury and death of tortoises is minimized (i.e., clearance surveys, exclusion fencing, relocation, translocation, and qualified tortoise biologists).

2. The applicant will implement measures to reduce the potential for increased predation by common ravens, both in the vicinity of the project footprint and regionally, and to reduce the spread of invasive nonnative plants in the project area.

3. Current information from permanent study plots and line distance sampling does not document a statistical trend in adult tortoise densities in the Eastern Colorado Desert Recovery Unit. Nonetheless, given the small number of tortoises affected by the proposed project, we have no information to indicate that development of the proposed project would appreciably reduce the tortoise population levels in this recovery unit.

4. Few, if any, tortoises are likely to be injured and killed as a result of relocation or translocation.

5. Though the proposed project would reduce the amount of available tortoise habitat in the McCoy Valley and thereby result in a loss of habitat connectivity in the McCoy Valley between the Chuckwalla and Chemehuevi DWMAs, sufficient habitat would remain to the west and east of the proposed project to provide connectivity of tortoises in the McCoy Valley in the long term. Relocation of some tortoises into habitat adjacent to the project area, and translocation of some tortoises to a recipient site either adjacent to the project or in the upper McCoy Wash, will increase tortoise numbers in those areas. Successful translocation would minimize these effects by allowing those tortoises to remain in the population and contribute towards recovery of the species.

6. Compensation requirements through BLM, California Department of Fish and Wildlife (CDFW), and CEC will result in an increase in the quantity and quality of habitat managed for the conservation of the tortoise.

The Modified Blythe Solar Power Project has a smaller footprint that fits entirely within the Approved Project resulting in reduced effects to desert tortoise. Specifically: (1) the impacts to desert tortoise habitat have been reduced by 2,983 acres (from 6,958 acres to 3,975 acres); and (2) the reduced footprint of the Modified Project eliminates the westernmost portion of the Approved Project, thereby avoiding impacts to

higher quality tortoise habitat located nearer the McCoy Mountains. Additionally, circumstances on the ground have not changed between issuance of the BO for the Approved Project with respect to Desert Tortoise. As a result, given that the Modified Project has a reduced effect on desert tortoise relative to those assessed in the 2010 BO, the Final EIS for the Modified Project contemplates the same desert tortoise mitigation measures as those required by the 2010 BO and 2010 ROD for the Approved Project, and the 2010 BO was a non-jeopardy biological opinion that imposed no RPAs, the BLM reasonably expects there that there will be no RPAs for desert tortoise incorporated into the amended BO. Therefore, BLM's decision to issue a ROD and only authorize limited project construction activities prior to the conclusion of the consultation process would not constitute an irretrievable commitment of resources as none of the contemplated actions would preclude the formulation or implementation of RPAs with respect to desert tortoise. Moreover, in the unlikely event USFWS were to identify any RPAs, the limited site preparation activities contemplated under the initial NTP would not preclude any potential project modifications based on any RPAs that emerge from the consultation process, nor would they interfere with the BLM's authority to modify the ROW grant under 43 C.F.R. § 2805.15(e).

APPENDIX 4

Programmatic Agreement, as amended

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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 c

BY: _____ ATE: c OCT 0 5 2010

John Kalish
Manager, Palm Springs-South Coast Field Office c

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER c

BY: _____ ATE:c 7 OCT 2010

Milford Wayne Donaldson, FAIA c
State Historic Preservation Officer c

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: _____ DATE: _____

TITLE: _____

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: _____ DATE: _____

TITLE: _____

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: _____ DATE: _____

TITLE: _____

APPENDIX A: IDENTIFICATION AND EVALUATION

I. IDENTIFICATION

a) The BLM will ensure that all cultural resources identified during cultural resources survey are recorded on new or updated California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the "Instructions for Recording Historical Resources" (Office of Historic Preservation, March 1995).

   i) Previously unrecorded cultural resources which have religious or cultural significance to Tribes identified during cultural resources investigations and/or through consultations with Tribes may be recorded on the California DPR Form 523, unless a Tribe, Tribal organization, or an individual from a Tribe objects. If such objection arises, the properties may be recorded on a form and in a manner that is in accordance with the recommendations of the Tribe, Tribal organization, or of the individual. If the traditional cultural property is also a historical or archaeological site, those components of site will be recorded on the appropriate DPR form and filed with the California Historical Resources Information System (CHRIS).

b) The cultural resources contractor will obtain permanent site numbers from CHRIS regional information center.

c) The BLM, in consultation with the Energy Commission and the SHPO, shall review all site records for accuracy, adequacy of information, and completeness and determine whether they are sufficient to support agency determinations and findings. Final approved site records shall be submitted to the CHRIS. Permanent site numbers shall then be used in all final reports and other documents prepared pursuant to the requirements of this Agreement.

d) The BLM, in consultation with the Energy Commission will ensure that cultural resources survey reports are responsive to Energy Commission Data Requests.

II. EVALUATION

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

   Prehistoric Archaeological Resources
   Chipped Stone Deposits
   Sparse Lithic Scatters
   Chipped and Ground Stone Deposits
   Ceramic Deposits
   Archaeological Deposits that Include FAR Concentrations

Trail Segments

Historical Archaeological Resources
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

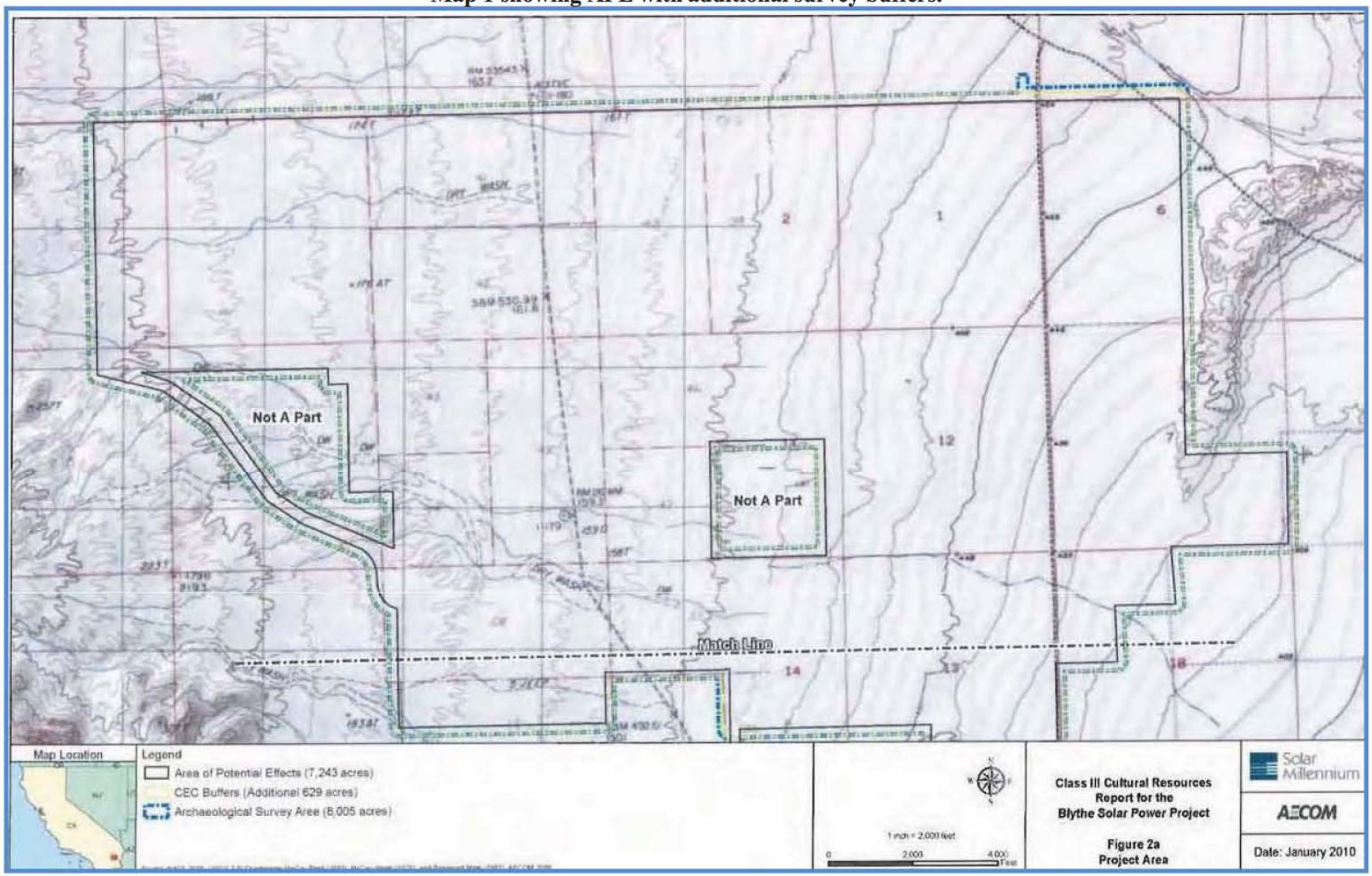
off from an existing SCG line 1,800 feet south of I-10. The alignment of the pipeline is directly north to the project site.

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.

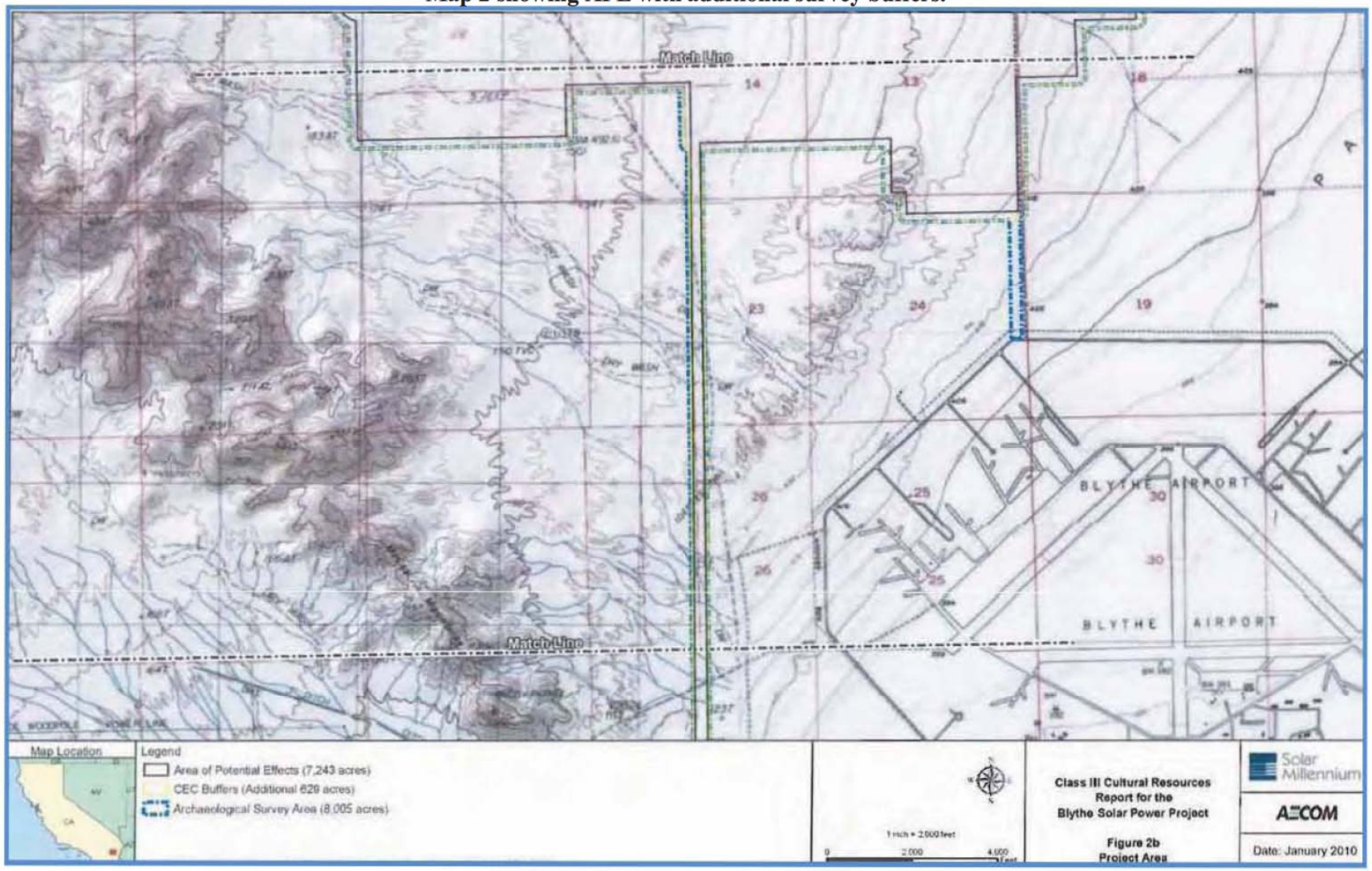
APPENDIX E: PROJECT MAPS AND ILLUSTRATIONS

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.

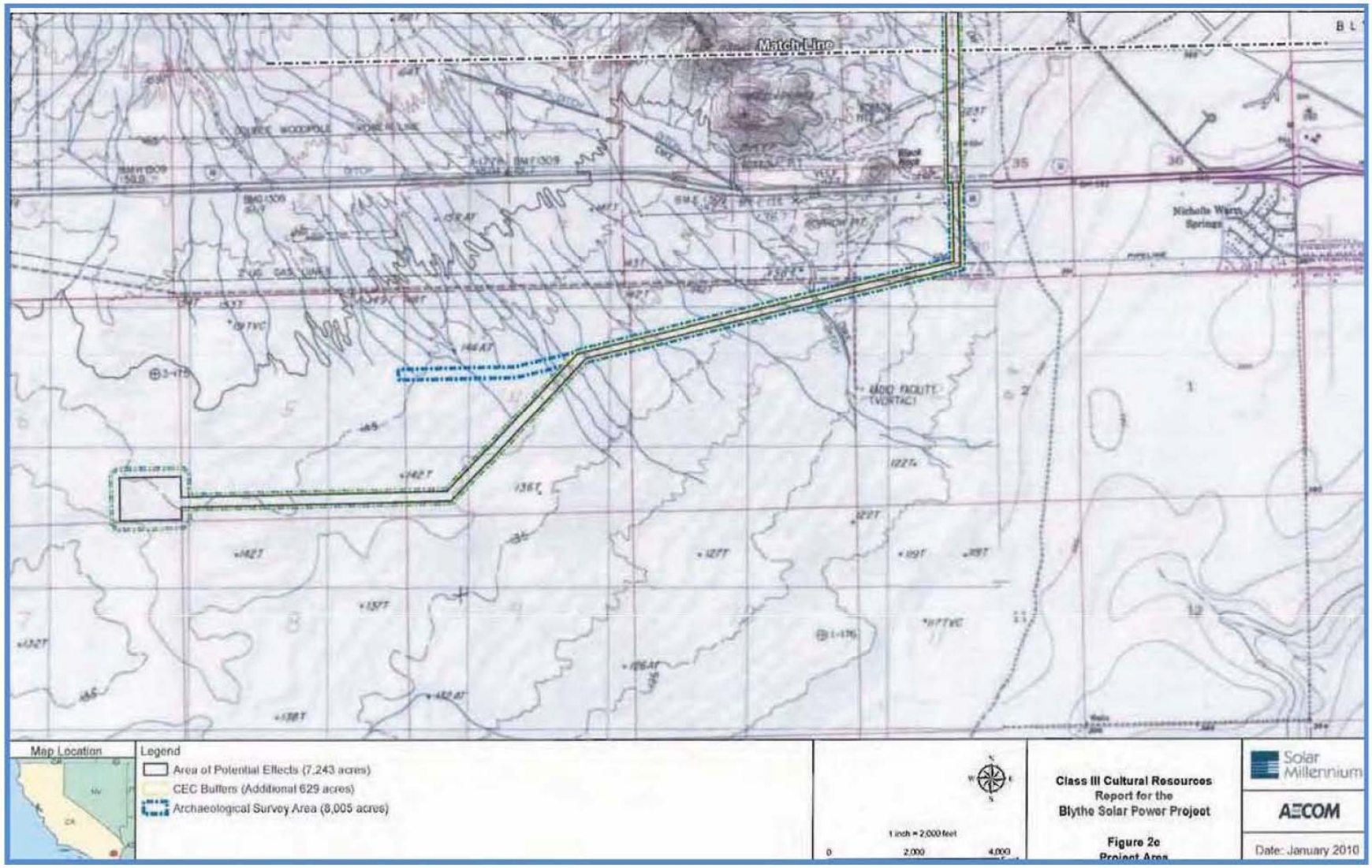


Illustration of the configuration and layout of proposed project and components.

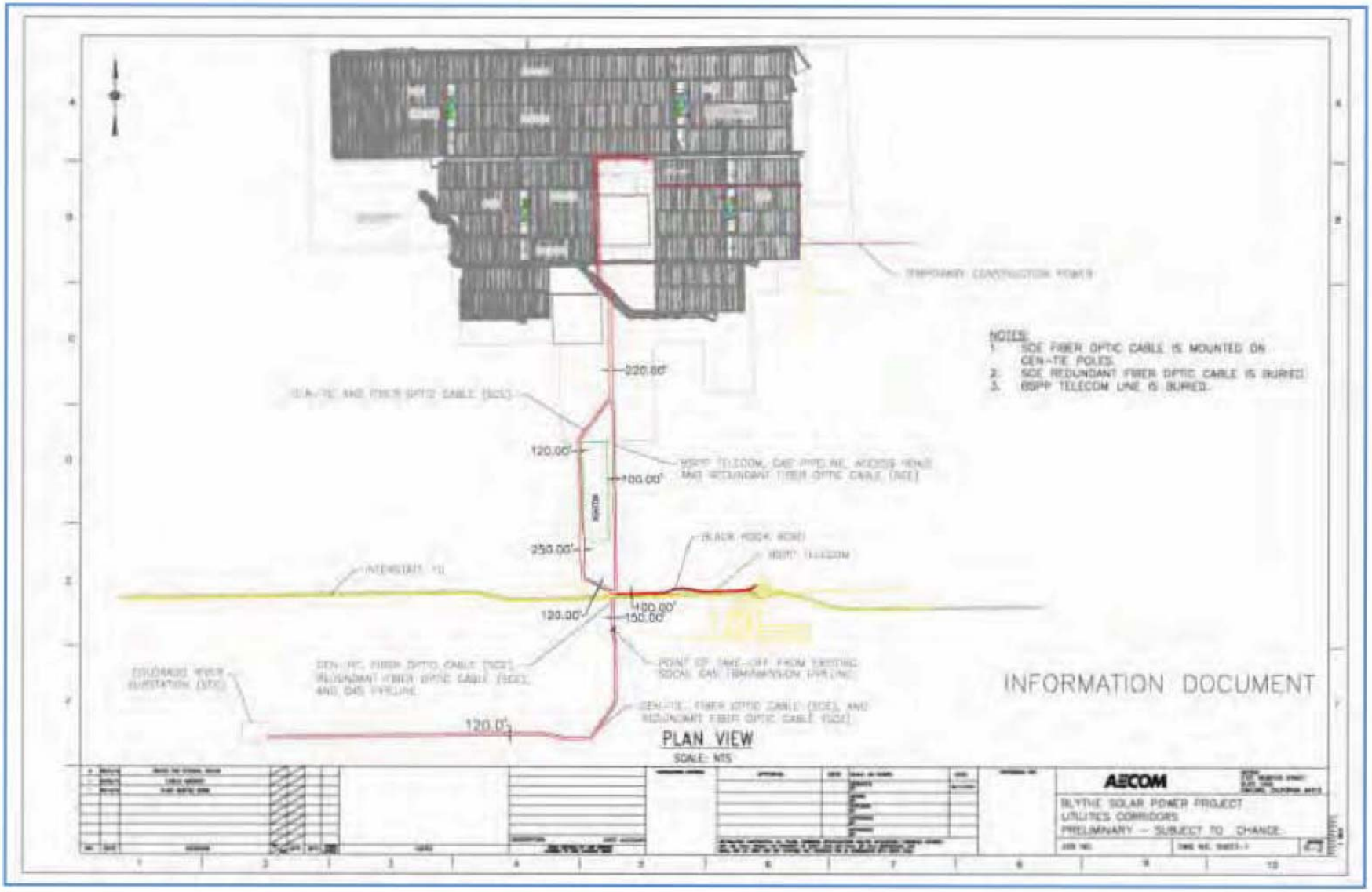
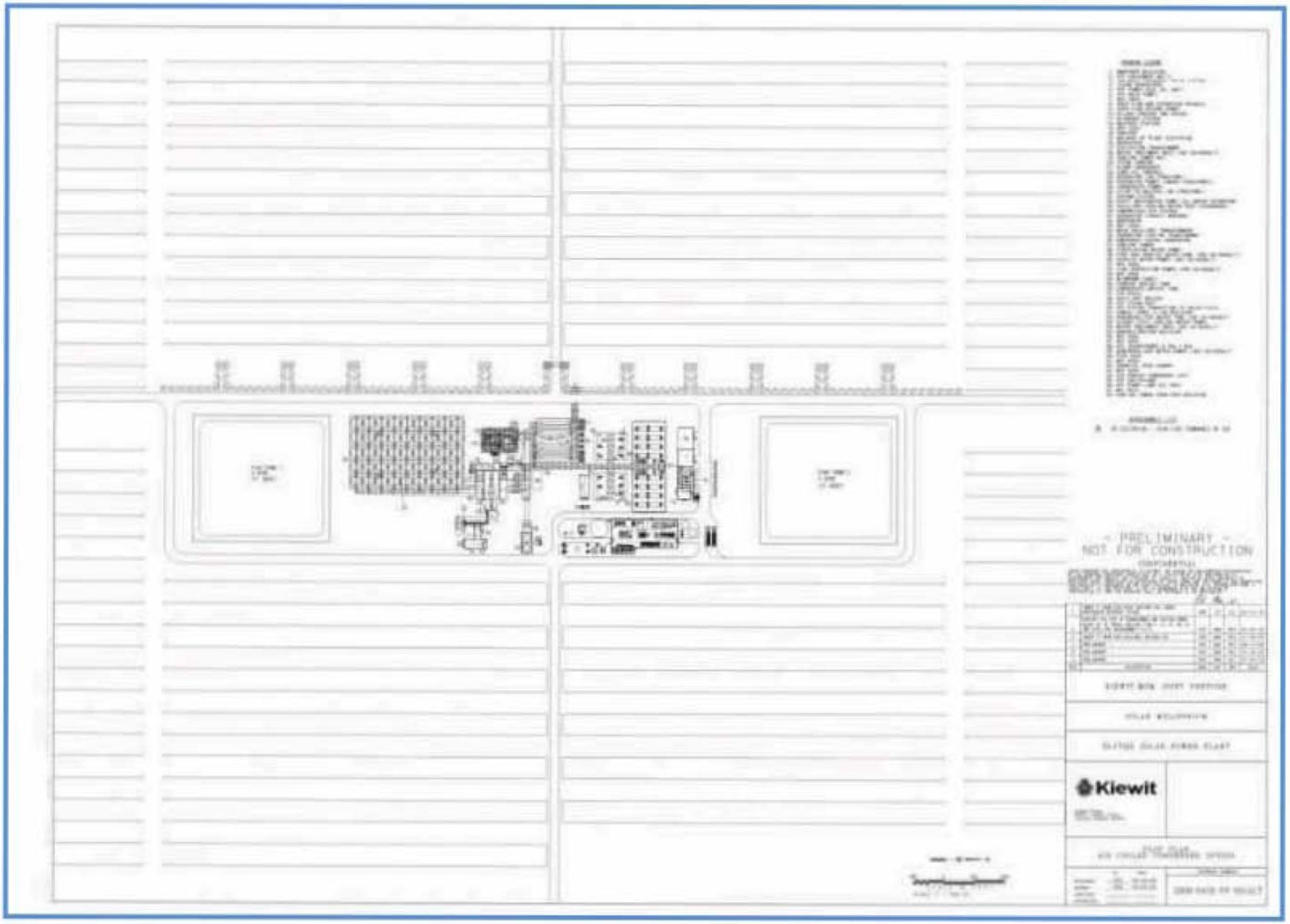
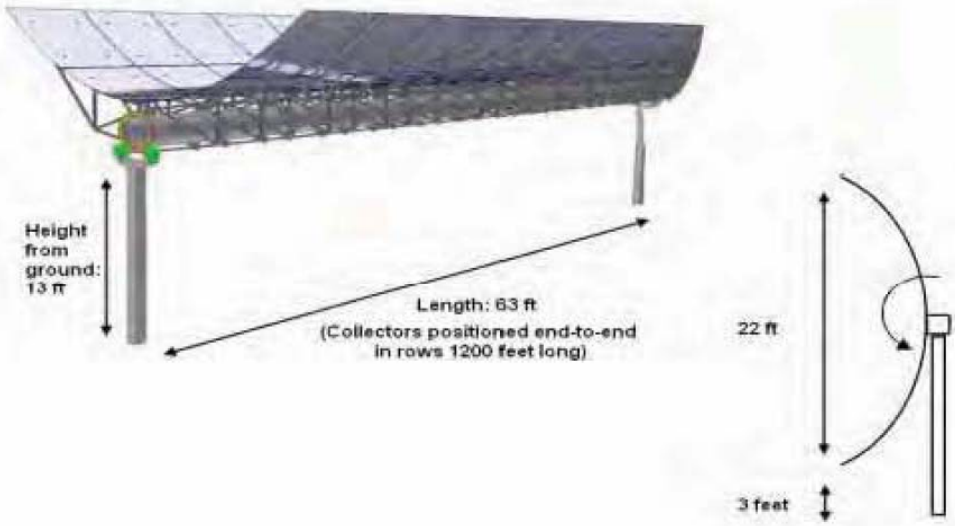


Illustration of the Power Block Arrangement



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

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. Millennium	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.

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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

_____
Date

_____
Date

_____
Date

_____
Date

_____
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.

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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

Appendix L
Amendment No. 1

To

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

Per Stipulation XI of the Agreement this Amendment adds Stipulation XI subpart e) to allow for changes in Project ownership without requiring further amendments to the Programmatic Agreement.

Stipulation XI

Stipulation XI would be amended to add the following language:

e) "The terms of this Agreement are a condition of any ROD and the ROW grant that the BLM may issue and are binding on the Applicant. For purposes of this Agreement, changes in the corporate name of the Applicant or reassignment of the ROW to a subsidiary company or other entity may be authorized by the BLM and does not require the Agreement to be amended."

All other Stipulations are extended without modification. This Amendment remains in effect unless otherwise amended or terminated under Stipulation XIII (Termination).

SIGNATORY PARTIES

U.S. BUREAU OF LAND MANAGEMENT

BY: _____ DATE: 11/14/2013
John R. Kalish
Manager, Palm Springs-South Coast Field Office

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

BY: _____ DATE: 11-18-13
Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

APPENDIX 5
Adopted Mitigation Measures

Introduction

The table that follows presents a compilation of Grant Holder-proposed Design Features (DF) and Mitigation Measures (MM) adopted in the Record of Decision (ROD) for the Modified Blythe Solar Power Project (Modified Project). The purpose of the table is to provide a single comprehensive list of the plans, measures, and other actions that will be implemented to avoid or reduce impacts of the Modified Project on the human environment, the timing for their implementation, and related monitoring and reporting requirements. For the purposes of this document, “Condition of Certification” refers to a Grant Holder-proposed Design Feature.

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Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Facility Design				
DF GEN-1: The Project Owner shall design, construct, and inspect the project in accordance with the 2010 California Building Standards Code (CBSC), also known as Title 24, California Code of Regulations, which encompasses the California Building Code (CBC), California Building Standards Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Fire Code, California Code for Building Conservation, California Reference Standards Code, and all other applicable engineering LORS in effect at the time initial design plans are submitted to the CBO for review and approval (the CBSC in effect is the edition that has been adopted by the California Building Standards Commission and published at least 180 days previously). The Project Owner shall ensure that all the provisions of the above applicable codes are enforced during the construction, addition, alteration, moving, demolition, repair, or maintenance of the completed facility. All transmission facilities (lines, switchyards, switching stations and substations) are covered in the conditions of certification in the **Transmission System Engineering** section of this document. In the event that the initial engineering designs are submitted to the CBO when the successor to the 2010 CBSC is in effect, the 2010 CBSC provisions shall be replaced with the applicable successor provisions. Where, in any specific case, different sections of the code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern. The Project Owner shall ensure that all contracts with contractors, subcontractors, and suppliers clearly specify that all work performed and materials supplied comply with the codes listed above.	Within 30 days following receipt of the certificate of occupancy, the Project Owner shall submit to the CPM a statement of verification, signed by the responsible design engineer, attesting that all designs, construction, installation, and inspection requirements of the applicable LORS and the Energy Commission's decision have been met in the area of facility design. The Project Owner shall provide the CPM a copy of the certificate of occupancy within 30 days of receipt from the CBO. Once the certificate of occupancy has been issued, the project owner shall inform the CPM at least 30 days prior to any construction, addition, alteration, moving, demolition, repair, or maintenance to be performed on any portion(s) of the completed facility that requires CBO approval for compliance with the above codes. The CPM will then determine if the CBO needs to approve the work.			
DF GEN-2: Before submitting the initial engineering designs for CBO review, the project owner shall furnish the CPM and the CBO with a schedule of facility design submittals, and master drawing and master specifications lists. The schedule shall contain a list of proposed submittal packages of designs, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the Project Owner shall provide specific packages to the CPM upon request.	At least 60 days (or a Project Owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, the master drawing and master specifications lists of documents to be submitted to the CBO for review and approval. These documents shall be the pertinent design documents for the major structures and equipment listed in **Facility Design Table 2**, below. Major structures and equipment shall be added to or deleted from the table only with CPM approval. The project owner shall provide schedule updates in the monthly compliance report. **Facility Design Table 2** **Major Structures and Equipment List** **Equipment/System** — **Quantity (Plant)** PV Module — 6,000,000 PV Racking System[1] — 71,500 Step-up Transformer Foundation and Connections — 4 Power Conversion Station Foundation and Connections — 250 Met Station Foundation and Connections — 4 Circuit Breaker Foundation and Connections — 29 Operation and Maintenance Facility Building Structure, Foundation and Connections — 1 Raw/Fire Water Tank Structure, Foundation and Connections — 1 Demineralized Water Tank Structure, Foundation and Connections — 1 Potable Water Tank Structure, Foundation and Connections — 1 Drainage System (including sanitary drain and waste) — 1 Lot HVAC Systems — 1 Lot Temperature Control and Ventilation Systems (including water and septic connections) — 1 Lot Building Energy Conservation Systems — 1 Lot Switchboards, Buses and Towers for Operations — 1 Lot Electrical Cables/Duct Banks — 4 Lots [1] PV equipment quantities are based on the existing plant layouts			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Facility Design (cont.)				
DF GEN-3: The Project Owner shall make payments to the CBO for design review, plan checks, and construction inspections, based upon a reasonable fee schedule to be negotiated between the Project Owner and the CBO. These fees may be consistent with the fees listed in the 2010 CBC, adjusted for inflation and other appropriate adjustments; may be based on the value of the facilities reviewed; may be based on hourly rates; or may be otherwise agreed upon by the project owner and the CBO.	The Project Owner shall make the required payments to the CBO in accordance with the agreement between the Project Owner and the CBO. The Project Owner shall send a copy of the CBO's receipt of payment to the CPM in the next monthly compliance report indicating that applicable fees have been paid.			
DF GEN-4: Prior to the start of rough grading, the project owner shall assign a California- registered architect, or a structural or civil engineer, as the resident engineer (RE) in charge of the project. All transmission facilities (lines, switchyards, switching stations, and substations) are addressed in the conditions of certification in the **Transmission System Engineering** section of this document.	At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the resume and registration number of the RE and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within five days of the approval.			
The RE may delegate responsibility for portions of the project to other registered engineers. Registered mechanical and electrical engineers may be delegated responsibility for mechanical and electrical portions of the project, respectively. A project may be divided into parts, provided that each part is clearly defined as a distinct unit. Separate assignments of general responsibility may be made for each designated part. The RE shall: 1. Monitor progress of construction work requiring CBO design review and inspection to ensure compliance with LORS; 2. Ensure that construction of all facilities subject to CBO design review and inspection conforms in every material respect to applicable LORS, these conditions of certification, approved plans, and specifications; 3. Prepare documents to initiate changes in approved drawings and specifications when either directed by the project owner or as required by the conditions of the project; 4. Be responsible for providing project inspectors and testing agencies with complete and up-to-date sets of stamped drawings, plans, specifications, and any other required documents; 5. Be responsible for the timely submittal of construction progress reports to the CBO from the project inspectors, the contractor, and other engineers who have been delegated responsibility for portions of the project; and 6. Be responsible for notifying the CBO of corrective action or the disposition of items noted on laboratory reports or other tests when they do not conform to approved plans and specifications. The RE (or his delegate) must be located at the project site, or be available at the project site within a reasonable period of time, during any hours in which construction takes place. The RE shall have the authority to halt construction and to require changes or remedial work if the work does not meet requirements. If the RE or the delegated engineers are reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.	If the RE or the delegated engineer(s) is subsequently reassigned or replaced, the project owner has five days to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.			
DF GEN-5: Prior to the start of rough grading, the project owner shall assign at least one of each of the following California registered engineers to the project: a civil engineer; a soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering; and an engineering geologist. Prior to the start of construction, the project owner shall assign at least one of each of the following California registered engineers to the project: a design engineer who is either a structural engineer or a civil engineer fully competent and proficient in the design of PV plants and equipment support; a mechanical engineer; and an electrical engineer. (California Business and Professions Code section 6704 et seq., and sections 6730, 6731 and 6736 require state registration to practice as a civil engineer or structural engineer in California). All transmission facilities (lines, switchyards, switching stations, and substations) are handled in the conditions of certification in the **Transmission System Engineering** section of this document. The tasks performed by the civil, mechanical, electrical, or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (for example, proposed earthwork, civil structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer. The project owner shall submit, to the CBO for review and approval, the names, qualifications, and registration numbers of all responsible engineers assigned to the project. If any one of the designated responsible engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned responsible engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer. A. The civil engineer shall: 1. Review the foundation investigations, geotechnical, or soils reports prepared by the soils engineer, the geotechnical engineer, or by a civil engineer experienced and knowledgeable in the practice of soils engineering;	At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible civil engineer, soils (geotechnical) engineer and engineering geologist assigned to the project. At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of construction, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible design engineer, mechanical engineer, and electrical engineer assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the responsible engineers within five days of the approval. If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Facility Design (cont.)				
2. Design (or be responsible for the design of), stamp, and sign all plans, calculations, and specifications for proposed site work, civil works, and related facilities requiring design review and inspection by the CBO. At a minimum, these include: grading, site preparation, excavation, compaction, construction of secondary containment, foundations, erosion and sedimentation control structures, drainage facilities, underground utilities, culverts, site access roads and sanitary sewer systems; and 3. Provide consultation to the RE during the construction phase of the project and recommend changes in the design of the civil works facilities and changes to the construction procedures. B. The soils engineer, geotechnical engineer, or civil engineer experienced and knowledgeable in the practice of soils engineering, shall: 1. Review all the engineering geology reports; 2. Prepare the foundation investigations, geotechnical, or soils reports containing field exploration reports, laboratory tests, and engineering analysis detailing the nature and extent of the soils that could be susceptible to liquefaction, rapid settlement or collapse when saturated under load; 3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with requirements set forth in the 2010 CBC (depending on the site conditions, this may be the responsibility of either the soils engineer, the engineering geologist, or both); and 4. Recommend field changes to the civil engineer and RE. This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform to the predicted conditions used as the basis for design of earthwork or foundations. C. The engineering geologist shall: 1. Review all the engineering geology reports and prepare a final soils grading report; and 2. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in the 2010 CBC (depending on the site conditions, this may be the responsibility of either the soils engineer, the engineering geologist, or both). The design engineer shall: 1. Be directly responsible for the design of the proposed structures and equipment supports; 2. Provide consultation to the RE during design and construction of the project; 3. Monitor construction progress to ensure compliance with engineering LORS; 4. Evaluate and recommend necessary changes in design; and 5. Prepare and sign all major building plans, specifications, and calculations. E. The mechanical engineer shall be responsible for, and sign and stamp a statement with, each mechanical submittal to the CBO, stating that the proposed final design plans, specifications, and calculations conform to all of the mechanical engineering design requirements set forth in the Energy Commission's decision. F. The electrical engineer shall: 1. Be responsible for the electrical design of the project; and 2. Sign and stamp electrical design drawings, plans, specifications, and calculations.				
DF GEN-6: Prior to the start of an activity requiring special inspection, including prefabricated assemblies, the project owner shall assign to the project, qualified and certified special inspector(s) who shall be responsible for the special inspections required by the 2010 CBC. All transmission facilities (lines, switchyards, switching stations, and substations) are handled in conditions of certification in the **Transmission System Engineering** section of this document. A certified weld inspector, certified by the American Welding Society (AWS), and/or American Society of Mechanical Engineers (ASME) as applicable, shall inspect welding performed on-site requiring special inspection (including structural, piping, tanks and pressure vessels). The special inspector shall: 1. Be a qualified person who shall demonstrate competence, to the satisfaction of the CBO, for inspection of the particular type of construction requiring special or continuous inspection; 2. Inspect the work assigned for conformance with the approved design drawings and specifications; 3. Furnish inspection reports to the CBO and RE. All discrepancies shall be brought to the immediate attention of the RE for correction, then, if uncorrected, to the CBO and the CPM for corrective action; and 4. Submit a final signed report to the RE, CBO, and CPM, stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans, specifications, and other provisions of the applicable edition of the CBC.	At least 15 days (or project owner- and CBO-approved alternative time frame) prior to the start of an activity requiring special inspection, the project owner shall submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s), or other certified special inspector(s) assigned to the project to perform one or more of the duties set forth above. The project owner shall also submit to the CPM a copy of the CBO's approval of the qualifications of all special inspectors in the next monthly compliance report. If the special inspector is subsequently reassigned or replaced, the project owner has five days in which to submit the name and qualifications of the newly assigned special inspector to the CBO for approval. The project owner shall notify the CPM of the CBO's approval of the newly assigned inspector within five days of the approval.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Facility Design (cont.)				
DF GEN-7: If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend required corrective actions. The discrepancy documentation shall be submitted to the CBO for review and approval. The discrepancy documentation shall reference this condition of certification and, if appropriate, applicable sections of the CBC and/or other LORS.	The project owner shall transmit a copy of the CBO's approval of any corrective action taken to resolve a discrepancy to the CPM in the next monthly compliance report. If any corrective action is disapproved, the project owner shall advise the CPM, within five days, of the reason for disapproval and the revised corrective action to obtain CBO's approval.			
DF GEN-8: The project owner shall obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. The project owner shall request the CBO to inspect the completed structure and review the submitted documents. The project owner shall notify the CPM after obtaining the CBO's final approval. The project owner shall retain one set of approved engineering plans, specifications, and calculations (including all approved changes) at the project site or at another accessible location during the operating life of the project. Electronic copies of the approved plans, specifications, calculations, and marked-up as-builts shall be provided to the CBO for retention by the CPM.	Within 15 days of the completion of any work, the project owner shall submit to the CBO, with a copy to the CPM, in the next monthly compliance report, (a) a written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans. After storing the final approved engineering plans, specifications, and calculations described above, the project owner shall submit to the CPM a letter stating both that the above documents have been stored and the storage location of those documents. Within 90 days of the completion of construction, the project owner shall provide to the CBO three sets of electronic copies of the above documents at the project owner's expense. These are to be provided in the form of "read only" (Adobe pdf 6.0) files, with restricted (password-protected) printing privileges, on archive quality compact discs.			
DF CIVIL-1: The project owner shall submit to the CBO for review and approval the following: 1. Design of the proposed drainage structures and the grading plan; 2. An erosion and sedimentation control plan; 3. Related calculations and specifications, signed and stamped by the responsible civil engineer; and 4. Soils, geotechnical, or foundation investigations reports required by the 2010 CBC.	At least 15 days (or project owner- and CBO-approved alternative time frame) prior to the start of site grading the project owner shall submit the documents described above to the CBO for design review and approval. In the next monthly compliance report following the CBO's approval, the project owner shall submit a written statement certifying that the documents have been approved by the CBO.			
DF CIVIL-2: The resident engineer shall, if appropriate, stop all earthwork and construction in the affected areas when the responsible soils engineer, geotechnical engineer, or the civil engineer experienced and knowledgeable in the practice of soils engineering identifies unforeseen adverse soil or geologic conditions. The project owner shall submit modified plans, specifications, and calculations to the CBO based on these new conditions. The project owner shall obtain approval from the CBO before resuming earthwork and construction in the affected area.	The project owner shall notify the CPM within 24 hours, when earthwork and construction is stopped as a result of unforeseen adverse geologic/soil conditions. Within 24 hours of the CBO's approval to resume earthwork and construction in the affected areas, the project owner shall provide to the CPM a copy of the CBO's approval.			
DF CIVIL-3: The project owner shall perform inspections in accordance with the 2010 CBC. All plant site-grading operations, for which a grading permit is required, shall be subject to inspection by the CBO. If, in the course of inspection, it is discovered that the work is not being performed in accordance with the approved plans, the discrepancies shall be reported immediately to the resident engineer, the CBO, and the CPM. The project owner shall prepare a written report, with copies to the CBO and the CPM, detailing all discrepancies, non-compliance items, and the proposed corrective action.	Within five days of the discovery of any discrepancies, the resident engineer shall transmit to the CBO and the CPM a non-conformance report (NCR), and the proposed corrective action for review and approval. Within five days of resolution of the NCR, the project owner shall submit the details of the corrective action to the CBO and the CPM. A list of NCRs, for the reporting month, shall also be included in the following monthly compliance report.			
DF CIVIL-4: After completion of finished grading and erosion and sedimentation control and drainage work, the project owner shall obtain the CBO's approval of the final grading plans (including final changes) for the erosion and sedimentation control work. The civil engineer shall state that the work within his/her area of responsibility was done in accordance with the final approved plans.	Within 30 days (or project owner- and CBO-approved alternative time frame) of the completion of the erosion and sediment control mitigation and drainage work, the project owner shall submit to the CBO, for review and approval, the final grading plans (including final changes) and the responsible civil engineer's signed statement that the installation of the facilities and all erosion control measures were completed in accordance with the final approved combined grading plans, and that the facilities are adequate for their intended purposes, along with a copy of the transmittal letter to the CPM. The project owner shall submit a copy of the CBO's approval to the CPM in the next monthly compliance report.			
DF STRUC-1: Prior to the start of any increment of construction of any major structure or component listed in **Facility Design Table 2** of condition of certification **GEN-2**, above, the project owner shall submit to the CBO for design review and approval the proposed lateral force procedures for project structures and the applicable designs, plans and drawings for project structures. Proposed lateral force procedures, designs, plans and drawings shall be those for the following items (from **Table 2**, above): 1. Major project structures; 2. Major foundations, equipment supports, and anchorage; and 3. Large field-fabricated tanks. Construction of any structure or component shall not begin until the CBO has approved the lateral force procedures to be employed in designing that structure or component. The project owner shall: 1. Obtain approval from the CBO of lateral force procedures proposed for project structures; 2. Obtain approval from the CBO for the final design plans, specifications, calculations, soils reports, and applicable quality control procedures. If there are conflicting requirements, the more stringent shall govern (for example, highest loads, or lowest allowable stresses shall govern). All plans, calculations, and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations, and specifications;	At least 60 days (or project owner- and CBO-approved alternative time frame) prior to the start of any increment of construction of any structure or component listed in **Facility Design Table 2** of DF **GEN-2**, above, the project owner shall submit to the CBO the above final design plans, specifications and calculations, with a copy of the transmittal letter to the CPM. The project owner shall submit to the CPM, in the next monthly compliance report, a copy of a statement from the CBO that the proposed structural plans, specifications, and calculations have been approved and comply with the requirements set forth in applicable engineering LORS.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Facility Design (cont.)				
3. Submit to the CBO the required number of copies of the structural plans, specifications, calculations, and other required documents of the designated major structures prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation; 4. Ensure that the final plans, calculations, and specifications clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. The final designs, plans, calculations, and specifications shall be signed and stamped by the responsible design engineer; and 5. Submit to the CBO the responsible design engineer's signed statement that the final design plans conform to applicable LORS.				
DF STRUC-2: The project owner shall submit to the CBO the required number of sets of the following documents related to work that has undergone CBO design review and approval: 1. Concrete cylinder strength test reports (including date of testing, date sample taken, design concrete strength, tested cylinder strength, age of test, type and size of sample, location and quantity of concrete placement from which sample was taken, and mix design designation and parameters); 2. Concrete pour sign-off sheets; 3. Bolt torque inspection reports (including location of test, date, bolt size, and recorded torques); 4. Field weld inspection reports (including type of weld, location of weld, inspection of non-destructive testing (NDT) procedure and results, welder qualifications, certifications, qualified procedure description or number (ref: AWS); and 5. Reports covering other structural activities requiring special inspections shall be in accordance with the 2010 CBC.	If a discrepancy is discovered in any of the above data, the project owner shall, within five days, prepare and submit an NCR describing the nature of the discrepancies and the proposed corrective action to the CBO, with a copy of the transmittal letter to the CPM. The NCR shall reference the condition(s) of certification and the applicable CBC chapter and section. Within five days of resolution of the NCR, the project owner shall submit a copy of the corrective action to the CBO and the CPM. The project owner shall transmit a copy of the CBO's approval or disapproval of the corrective action to the CPM within 15 days. If disapproved, the project owner shall advise the CPM, within five days, the reason for disapproval, and the revised corrective action to obtain CBO's approval.			
DF STRUC-3: The project owner shall submit to the CBO design changes to the final plans required by the 2010 CBC, including the revised drawings, specifications, calculations, and a complete description of, and supporting rationale for, the proposed changes, and shall give to the CBO prior notice of the intended filing.	On a schedule suitable to the CBO, the project owner shall notify the CBO of the intended filing of design changes, and shall submit the required number of sets of revised drawings and the required number of copies of the other above-mentioned documents to the CBO, with a copy of the transmittal letter to the CPM. The project owner shall notify the CPM, via the monthly compliance report, when the CBO has approved the revised plans.			
DF STRUC-4: Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in the 2010 CBC shall, at a minimum, be designed to comply with the requirements of that chapter.	At least 30 days (or project owner- and CBO-approved alternate time frame) prior to the start of installation of the tanks or vessels containing the above specified quantities of toxic or hazardous materials, the project owner shall submit to the CBO for design review and approval final design plans, specifications, and calculations, including a copy of the signed and stamped engineer's certification. The project owner shall send copies of the CBO approvals of plan checks to the CPM in the following monthly compliance report. The project owner shall also transmit a copy of the CBO's inspection approvals to the CPM in the monthly compliance report following completion of any inspection.			
DF MECH-1: The project owner shall submit, for CBO design review and approval, the proposed final design, specifications and calculations for each plant major piping and plumbing system listed in **Facility Design Table 2**, condition of certification **GEN-2**, above. Physical layout drawings and drawings not related to code compliance and life safety need not be submitted. The submittal shall also include the applicable QA/QC procedures. Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of that construction. The responsible mechanical engineer shall stamp and sign all plans, drawings, and calculations for the major piping and plumbing systems, subject to CBO design review and approval, and submit a signed statement to the CBO when the proposed piping and plumbing systems have been designed, fabricated, and installed in accordance with all of the applicable laws, ordinances, regulations and industry standards, which may include, but are not limited to: 1. Title 24, California Code of Regulations, Part 5 (California Plumbing Code); 2. Title 24, California Code of Regulations, Part 6 (California Energy Code, for building energy conservation systems and temperature control and ventilation systems); 3. Title 24, California Code of Regulations, Part 2 (California Building Code); and 4. Riverside County codes. The CBO may deputize inspectors to carry out the functions of the code enforcement agency.	At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of any increment of major piping or plumbing construction listed in **Facility Design Table 2**, DF **GEN-2,** above, the project owner shall submit to the CBO for design review and approval the final plans, specifications, and calculations, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with applicable LORS, and shall send the CPM a copy of the transmittal letter in the next monthly compliance report. The project owner shall transmit to the CPM, in the monthly compliance report following completion of any inspection, a copy of the transmittal letter conveying the CBO's inspection approvals.			
DF MECH-2 (deleted)				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Facility Design (cont.)				
DF MECH-3: The project owner shall submit to the CBO for design review and approval the design plans, specifications, calculations, and quality control procedures for any heating, ventilating, air conditioning (HVAC) or refrigeration system. Packaged HVAC systems, where used, shall be identified with the appropriate manufacturer's data sheets. The project owner shall design and install all HVAC and refrigeration systems within buildings and related structures in accordance with the CBC and other applicable codes. Upon completion of any increment of construction, the project owner shall request the CBO's inspection and approval of that construction. The final plans, specifications and calculations shall include approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical engineer shall sign and stamp all plans, drawings and calculations and submit a signed statement to the CBO that the proposed final design plans, specifications and calculations conform with the applicable LORS.	At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of construction of any HVAC or refrigeration system, the project owner shall submit to the CBO the required HVAC and refrigeration calculations, plans, and specifications, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with the CBC and other applicable codes, with a copy of the transmittal letter to the CPM.			
DF ELEC-1: Prior to the start of any increment of electrical construction for all electrical equipment and systems over 240 Volts (V) (see a representative list, below), with the exception of underground duct work and any physical layout drawings and drawings not related to code compliance and life safety, the project owner shall submit, for CBO design review and approval, the proposed final design, specifications, and calculations. Upon approval, the above listed plans, together with design changes and design change notices, shall remain on the site or at another accessible location for the operating life of the project. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. All transmission facilities (lines, switchyards, switching stations, and substations) are handled in conditions of certification in the **Transmission System Engineering** section of this document. A. Final plant design plans shall include: 1. one-line diagrams for the 34.5 kV systems and typical one-line diagrams for all systems under 34.5 kV and over 240 V systems; and 2. system grounding drawings. B. Final plant calculations must establish: 1. short-circuit ratings of plant equipment; 2. ampacity of feeder cables; 3. voltage drop in feeder cables; 4. system grounding requirements; 5. coordination study calculations for fuses, circuit breakers and protective relay settings for all AC systems under 34.5 kV and over 240 V; 6. system grounding requirements; and 7. lighting energy calculations. C. The following activities shall be reported to the CPM in the monthly compliance report: 1. Receipt or delay of major electrical equipment; 2. Testing or energization of major electrical equipment; and 3. A signed statement by the registered electrical engineer certifying that the proposed final design plans and specifications conform to requirements set forth in the Energy Commission decision.	At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of each increment of electrical construction, the project owner shall submit to the CBO for design review and approval the above listed documents. The project owner shall include in this submittal a copy of the signed and stamped statement from the responsible electrical engineer attesting compliance with the applicable LORS, and shall send the CPM a copy of the transmittal letter in the next monthly compliance report.			
Transmission System Engineering				
DF TSE-1: The project owner shall provide the Compliance Project Manager (CPM) and the Chief Building Official (CBO) with a schedule of transmission facility design submittals, a master drawing list, a master specifications list, and a major equipment and structure list. The schedule shall contain both a description and a list of proposed submittal packages for design, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide designated packages to the CPM when requested.	Prior to the start of construction of transmission facilities, the project owner shall submit the schedule, a master drawing list, and a master specifications list to both the CBO and the CPM. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment (see a list of major equipment in Table 1: Major Equipment List, below). Additions and deletions shall be made to the table only with both CPM and CBO approval. The project owner shall provide schedule updates in the monthly compliance report. **Table 1** **Major Equipment List** Breakers; Surge arrestors; Switchyard control building Step-up transformer; Disconnects; Transmission pole/tower Switchyard; Take-off facilities; Grounding system Busses; Electrical control building			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Transmission System Engineering (cont.)				
DF TSE-2: Before the start of construction, the project owner shall assign to the project an electrical engineer and at least one of each of the following: a. a civil engineer; b. a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; c. a design engineer who is either a structural engineer or a civil engineer and fully competent and proficient in the design of power plant structures and equipment supports; or d. a mechanical engineer (Business and Professions Code, § 6704 et seq. require state registration to practice as either a civil engineer or a structural engineer in California). The tasks performed by the civil, mechanical, electrical, or design engineers may be divided between two or more engineers as long as each engineer is responsible for a particular segment of the project, e.g., proposed earthwork, civil structures, power plant structures, or equipment support. No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer. The civil, geotechnical, or civil and design engineer, assigned as required by Facility Design Condition of Certification GEN-5, may be responsible for design and review of the Transmission System Engineering facilities. The project owner shall submit to the CBO, for review and approval, the names, qualifications, and registration numbers of all engineers assigned to the project. If any one of the designated engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer. This engineer shall be authorized to halt earth work and require changes if site conditions are unsafe or do not conform with the predicted conditions used as the basis for design of earth work or foundations. The electrical engineer shall: a. be responsible for the electrical design of the power plant switchyard, outlet, and termination facilities; and b. sign and stamp electrical design drawings, plans, specifications, and calculations.	Prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the engineers within five (5) days of the approval. If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five (5) days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five (5) days of the approval.			
DF TSE-3: If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend corrective action (2001 California Building Code, Chapter 1, § 108.4, approval required; Chapter 17, § 1701.3, *Duties and Responsibilities of the Special Inspector;* Appendix, Chapter 33, § 3317.7, *Notification of Noncompliance*). The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval, with reference to this condition of certification.	The project owner shall submit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM within 15 days of receipt. If disapproved, the project owner shall advise the CPM, within five (5) days, the reason for the disapproval, along with the revised corrective action required to obtain the CBO's approval.			
DF TSE-4: For the power plant switchyard, outlet line, and termination, the project owner shall not begin any construction until plans for that increment of construction have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one (1) year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. The following activities shall be reported in the Monthly Compliance Report: a. receipt or delay of major electrical equipment; b. testing or energization of major electrical equipment; and c. the number of electrical drawings approved, submitted for approval, and still to be submitted.	Prior to the start of each increment of construction, the project owner shall submit to the CBO for review and approval the final design plans, specifications, and calculations for equipment and systems of the power plant switchyard, outlet line, and termination, including a copy of the signed and stamped statement from the responsible electrical engineer verifying compliance with all applicable LORS. The project owner shall send the CPM a copy of the transmittal letter in the next Monthly Compliance Report.			
DF TSE-5: The project owner shall ensure that the design, construction, and operation of the proposed transmission facilities will conform to all applicable LORS, and the requirements listed below. The project owner shall submit the required number of copies of the design drawings and calculations, as determined by the CBO. a) The power plant outlet line shall meet or exceed the electrical, mechanical, civil, and structural requirements of CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, California ISO standards, National Electric Code (NEC) and related industry standards. b) Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with a short-circuit analysis. c) Outlet line crossings and line parallels with transmission and distribution facilities shall be coordinated with the transmission line owner and comply with the owner's standards. d) The project conductors shall be sized to accommodate the full output of the project. e) Termination facilities shall comply with applicable SCE interconnection standards. f) The project owner shall provide to the CPM: a. The Special Protection System (SPS) sequencing and timing if applicable,	Prior to the start of construction of transmission facilities, the project owner shall submit to the CBO for approval: a. Design drawings, specifications, and calculations conforming with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, CA ISO standards, National Electric Code (NEC) and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment; b. For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on "worst case conditions"[2] and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, California ISO standards, National Electric Code (NEC), and related industry standards;			

NOTE: [2] Worst-case conditions for the foundations would include for instance, a dead-end or angle pole.

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Transmission System Engineering (cont.)				
b. A letter stating that the mitigation measures or projects selected by the transmission owners for each reliability criteria violation, for which the project is responsible, are acceptable, c. The final Phase II Interconnection Study, including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable; and d. A copy of the executed LGIA signed by the California ISO and the project owner.	c. Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, and an engineering description of the equipment and configurations covered by requirements **DF TSE-5** a) through f), above; d. The Special Protection System (SPS) sequencing and timing if applicable shall be provided concurrently to the CPM. e. A letter stating that the mitigation measures or projects selected by the transmission owners for each reliability criteria violation, for which the project is responsible, are acceptable, f. The final Phase II Interconnection Study, including a description of facility upgrades, operational mitigation measures, and/or special protection system sequencing and timing if applicable, and g. A copy of the executed LGIA signed by the California ISO and the project owner.			
DF TSE-6: The project owner shall provide the following notice to the California ISO prior to synchronizing the facility with the California Transmission System: a. At least one (1) week prior to synchronizing the facility with the grid for testing, provide the California ISO a letter stating the proposed date of synchronization; and b. At least one business day prior to synchronizing the facility with the grid for testing, provide telephone notification to the California ISO Outage Coordination Department.	The project owner shall provide copies of the California ISO letter to the CPM when it is sent to the California ISO one (1) week prior to initial synchronization with the grid. The project owner shall contact the California ISO Outage Coordination Department, (Monday through Friday, between the hours of 0700 and 1530, at (916) 351-2300) at least one (1) business day prior to synchronizing the facility with the grid for testing. A report of conversation with the California ISO shall be provided electronically to the CPM one day before synchronizing the facility with the California transmission system for the first time.			
DF TSE-7: The project owner shall be responsible for the inspection of the transmission facilities during and after project construction, and any subsequent CPM and CBO approved changes thereto, to ensure conformance with: CPUC GO-95 or NESC; Title 8 CCR; Articles 35, 36, and 37 of the High Voltage Electric Safety Orders; applicable interconnection standards; NEC; and related industry standards. In case of nonconformance, the project owner shall inform the CPM and CBO in writing within 10 days of discovering such nonconformance and describe the corrective actions to be taken.	Within 60 days after first synchronization of the project, the project owner shall transmit to the CPM and CBO: 1. "As built" engineering description(s) and one-line drawings of the electrical portion of the facilities signed and sealed by the registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC GO-95 or NESC; Title 8 CCR,; Articles 35, 36, and 37 of the High Voltage Electric Safety Orders; applicable interconnection standards; NEC; and related industry standards. 2. An "as built" engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in responsible charge or acceptable alternative verification. "As built" drawings of the electrical, mechanical, structural, and civil portion of the transmission facilities shall be maintained at the power plant and made available, if requested, for CPM audit as set forth in the "Compliance Monitoring Plan." 3. A summary of inspections of the completed transmission facilities and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.			
Air Quality				
DF AQ-SC1: Air Quality Construction Mitigation Manager (AQCMM): The project owner shall designate and retain an on-site AQCMM who shall be responsible for directing and documenting compliance with Conditions of Certification **AQ-SC3**, **AQ-SC4** and **AQ-SC5** for the entire project site and linear facility construction. The on-site AQCMM may delegate responsibilities to one or more AQCMM Delegates. The AQCMM and AQCMM Delegates shall have full access to all areas of construction on the project site and linear facilities, and shall have the authority to stop any or all construction activities as warranted by applicable construction mitigation Conditions. The AQCMM and AQCMM Delegates may have other responsibilities in addition to those described in this Condition. The AQCMM shall not be terminated without written consent of the Compliance Project Manager (CPM).	At least 30 days prior to the start of ground disturbance, the project owner shall submit to the CPM for approval, the name, resume, qualifications, and contact information for the on-site AQCMM and all AQCMM Delegates.			
DF AQ-SC2 Air Quality Construction Mitigation Plan (AQCMP): The project owner shall provide an AQCMP, for approval, which details the steps that will be taken and the reporting requirements necessary to ensure compliance with Conditions of Certification **AQ-SC3**, **AQ-SC4,** and **AQ-SC5**.	At least 30 days prior to the start of any ground disturbance, the project owner shall submit the AQCMP to the CPM for approval. The AQCMP shall include effectiveness and environmental data for the proposed soil stabilizer. The CPM will notify the project owner of any necessary modifications to the plan within 15 days from the date of receipt.			
DF AQ-SC3: Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each Monthly Compliance Report that demonstrates compliance with the Air Quality Construction Mitigation Plan (AQCMP) mitigation measures for the purposes of minimizing fugitive dust emission creation from construction activities and preventing all fugitive dust plumes that would not comply with the performance standards identified in **AQ-SC4** from leaving the project site. The following fugitive dust mitigation measures shall be included in the Air Quality Construction Mitigation Plan (AQCMP) required by **AQ-SC2**, and any deviation from the AQCMP mitigation measures shall require prior CPM notification and approval.	The AQCMM shall provide the CPM a Monthly Compliance Report to include the following to demonstrate control of fugitive dust emissions: A. A summary of all actions taken to maintain compliance with this Condition; B. Copies of any complaints filed with the District in relation to project construction; and			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Air Quality (cont.)				
a. The main access roads through the facility to the power block areas will be either paved or stabilized using soil binders, or equivalent methods, to provide a stabilized surface that is similar for the purposes of dust control to paving, that may or may not include a crushed rock (gravel or similar material with fines removed) top layer, prior to initiating construction in the main power block area, and delivery areas for operations materials (chemicals, replacement parts, etc.) will be paved or treated prior to taking initial deliveries. b. All unpaved construction roads and unpaved operation and maintenance site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer or soil weighting agent that can be determined to be both as efficient or more efficient for fugitive dust control as ARB approved soil stabilizers, and shall not increase any other environmental impacts including loss of vegetation to areas beyond where the soil stabilizers are being applied for dust control. All other disturbed areas in the project and linear construction sites shall be watered as frequently as necessary during grading (consistent with Biology Conditions of Certification that address the minimization of standing water); and after active construction activities shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative approved soil stabilizing methods, in order to comply with the dust mitigation objectives of Condition of Certification **AQ-SC4**. The frequency of watering can be reduced or eliminated during periods of precipitation. c. No vehicle shall exceed 10 miles per hour on unpaved areas within the construction site, with the exception that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions. d. Visible speed limit signs shall be posted at the construction site entrances. e. All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways. f. Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station. g. All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways. h. All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM. i. Construction areas adjacent to any paved roadway below the grade of the surrounding construction area or otherwise directly impacted by sediment from site drainage shall be provided with sandbags or other equivalently effective measures to prevent run-off to roadways, or other similar run-off control measures as specified in the Storm Water Pollution Prevention Plan (SWPPP), only when such SWPPP measures are necessary so that this Condition does not conflict with the requirements of the SWPPP. j. All paved roads within the construction site shall be swept daily or as needed (less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris. k. At least the first 500 feet of any paved public roadway exiting the construction site or exiting other unpaved roads en route from the construction site or construction staging areas shall be swept as needed (less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff resulting from the construction site activities is visible on the public paved roadways. l. All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or shall be treated with appropriate dust suppressant compounds. m. All vehicles that are used to transport solid bulk material on public roadways and that have potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least one foot of freeboard. n. Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) shall be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this Condition shall remain in place until the soil is stabilized or permanently covered with vegetation.	C. Any other documentation deemed necessary by the CPM or AQCMM to verify compliance with this Condition. Such information may be provided via electronic format or disk at the project owner's discretion.			
DF AQ-SC4: Dust Plume Response Requirement: The AQCMM or an AQCMM Delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported (A) off the project site and within 400 feet upwind of any regularly occupied structures not owned by the project owner or (B) 200 feet beyond the centerline of the construction of linear facilities indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMP shall include a section detailing how the additional mitigation measures will be accomplished within the time limits specified. The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed. Step 1: The AQCMM or Delegate shall direct more intensive application of the existing mitigation methods within 15 minutes of making such a determination. Step 2: The AQCMM or Delegate shall direct implementation of additional methods of dust suppression if Step 1, specified above, fails to result in adequate mitigation within 30 minutes of the original determination. Step 3: The AQCMM or Delegate shall direct a temporary shutdown of the activity causing the emissions if Step 2, specified above, fails to result in effective mitigation within one hour of the original determination. The activity shall	The AQCMM shall provide the CPM a Monthly Compliance Report to include: A. A summary of all actions taken to maintain compliance with this Condition; B. Copies of any complaints filed with the District in relation to project construction; and C. Any other documentation deemed necessary by the CPM or AQCMM to verify compliance with this Condition. Such information may be provided via electronic format or disk at the project owner's discretion.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Air Quality (cont.)				
not restart until the AQCMM or Delegate is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes will not result upon restarting the shutdown source. The owner/operator may appeal to the CPM any directive from the AQCMM or Delegate to shut down an activity, if the shutdown shall go into effect within one hour of the original determination, unless overruled by the CPM before that time.				
DF AQ-SC5: Diesel-Fueled Engine Control: The AQCMM shall submit to the CPM, in the Monthly Compliance Report, a construction mitigation report that demonstrates compliance with the AQCMP mitigation measures for purposes of controlling diesel construction-related emissions. The following off-road diesel construction equipment mitigation measures shall be included in the Air Quality Construction Mitigation Plan (AQCMP) required by **AQ-SC2**, and any deviation from the AQCMP mitigation measures shall require prior and CPM notification and approval. a. All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCM showing that the engine meets the Conditions set forth herein. b. All construction diesel engines with a rating of 50 hp or higher shall meet, at a minimum, the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines, as specified in California Code of Regulations, Title 13, section 2423(b)(1), unless a good faith effort to the satisfaction of the CPM that is certified by the on-site AQCMM demonstrates that such engine is not available for a particular item of equipment. In the event that a Tier 3 engine is not available for any off-road equipment larger than 50 hp, that equipment shall be equipped with a Tier 2 engine, or an engine that is equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOX) and diesel particulate matter (DPM) to no more than Tier 2 levels unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this Condition, the use of such devices is "not practical" for the following, as well as other, reasons. 1. There is no available retrofit control device that has been verified by either the California Air Resources Board or U.S. Environmental Protection Agency to control the engine in question to Tier 2 equivalent emission levels and the highest level of available control using retrofit or Tier 1 engines is being used for the engine in question; or 2. The construction equipment is intended to be on site for 10 days or less. The CPM may grant relief from this requirement if the AQCMM can demonstrate a good faith effort to comply with this requirement and that compliance is not practical. c. The use of a retrofit control device may be terminated immediately, provided that the CPM is informed within 10 working days of the termination and that a replacement for the equipment item in question meeting the controls required in item "b" occurs within 10 days of termination of the use, if the equipment would be needed to continue working at this site for more than 15 days after the use of the retrofit control device is terminated, if one of the following conditions exists : 1. The use of the retrofit control device is excessively reducing the normal availability of the construction equipment due to increased down time for maintenance, and/or reduced power output due to an excessive increase in back pressure. 2. The retrofit control device is causing or is reasonably expected to cause engine damage. 3. The retrofit control device is causing or is reasonably expected to cause a substantial risk to workers or the public. 4. Any other seriously detrimental cause which has the approval of the CPM prior to implementation of the termination. d. All heavy earth-moving equipment and heavy duty construction-related trucks with engines meeting the requirements of (b) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications. e. All diesel heavy construction equipment shall not idle for more than ten minutes. Vehicles that need to idle as part of their normal operation (such as concrete trucks) are exempted from this requirement. f. Construction equipment will employ electric motors when feasible.	The AQCMM shall include in the Monthly Compliance Report the following to demonstrate control of diesel construction-related emissions: A. A summary of all actions taken to control diesel construction related emissions; B. A list of all heavy equipment used on site during that month, including the owner of that equipment and a letter from each owner indicating that equipment has been properly maintained; and C. Any other documentation deemed necessary by the CPM or AQCMM to verify compliance with this Condition. Such information may be provided via electronic format or disk at the project owner's discretion.			
DF AQ-SC6: The project owner, when obtaining dedicated on-road or off-road vehicles for panel washing activities and other facility maintenance activities, shall only obtain vehicles that meet California on-road vehicle emission standards or appropriate U.S.EPA/California off-road engine emission standards for the latest model year available when obtained.	At least 30 days prior to the start commercial operation, the project owner shall submit to the CPM a copy of the plan that identifies the size and type of the on-site vehicle and equipment fleet and the vehicle and equipment purchase orders and contracts and/or purchase schedule. The plan shall be updated every other year and submitted in the Annual Compliance Report.			
DF AQ-SC7: The project owner shall provide a Site Operations Dust Control Plan, including all applicable fugitive dust control measures identified in the verification of **AQ-SC3** that would be applicable to minimizing fugitive dust emission creation from operation and maintenance activities and preventing all fugitive dust plumes that would not comply with the performance standards identified in **AQ-SC4** from leaving the project site; that: A. describes the active operations and wind erosion control techniques such as windbreaks and chemical dust suppressants, including their ongoing maintenance procedures, that shall be used on areas that could be disturbed by vehicles or wind anywhere within the project boundaries; and	At least 30 days prior to start of commercial operation, the project owner shall submit to the CPM for review and approval a copy of the site Operations Dust Control Plan that identifies the dust and erosion control procedures, including effectiveness and environmental data for the proposed soil stabilizer, that will be used during operation of the project and that identifies all locations of the speed limit signs. Within 60 days after commercial operation, the project owner shall provide to the CPM a report identifying the locations of all speed limit signs, and a copy of the project employee and contractor training manual that clearly identifies that project employees and contractors are required to comply with the dust and erosion control procedures and on-site speed limits.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Air Quality (cont.)				
B. identifies the location of signs throughout the facility that will limit traveling on unpaved portion of roadways to solar equipment maintenance vehicles only. In addition, vehicle speed shall be limited to no more than 10 miles per hour on these unpaved roadways, with the exception that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions. The Site Operations Fugitive Dust Control Plan shall include the use of durable non-toxic soil stabilizers on all regularly used unpaved roads and disturbed off-road areas, or alternative methods for stabilizing disturbed off-road areas, within the project boundaries, and shall include the inspection and maintenance procedures that will be undertaken to ensure that the unpaved roads remain stabilized. The soil stabilizer used shall be a non-toxic soil stabilizer or soil weighting agent that can be determined to be as efficient as or more efficient for fugitive dust control than ARB approved soil stabilizers, and that shall not increase any other environmental impacts including loss of vegetation to areas beyond where the soil stabilizers are being applied for dust control. The performance and application of the fugitive dust controls shall also be measured against and meet the performance requirements of Condition **AQ-SC4**. The measures and performance requirements of **AQ-SC4** shall also be included in the operations dust control plan.				
Biological Resources				
MM BLM-BIO-7a: The Applicant shall ensure that monitoring accomplished under BIO-7 and other mitigating measures use available climatalogical data when analyzing project effects or resource trends.	Applies to implementation of DF BIO-7; see below.			
DF BIO-1: Designated Biologist Selection and Qualifications.[3] The project owner shall assign at least one Designated Biologist to the project. The project owner shall submit the resume of the proposed Designated Biologist(s), with at least three references and contact information, to the Energy Commission Compliance Project Manager (CPM) for approval in consultation with CDFW and USFWS. The Designated Biologist must meet the following minimum qualifications: 1. Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field; 2. Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society; 3. Have at least one year of field experience with biological resources found in or near the project area; 4. Meet the current USFWS Authorized Biologist qualifications criteria (www.fws.gov/ventura/speciesinfo/protocols_guidelines), demonstrate familiarity with protocols and guidelines for the desert tortoise, and be approved by the USFWS; and 5. Possess a California ESA Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise. 6. In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, in consultation with CDFW and USFWS, that the proposed Designated Biologist or alternate has the appropriate training and background to effectively implement the Conditions of Certification.	At least 60 days prior to site mobilization or construction-related ground disturbance, the project owner shall submit the names of the Designated Biologist (s) along with completed USFWS Desert Tortoise Authorized Biologist Request Form (www.fws.gov/ventura/speciesinfo/protocols_guidelines) to the USFWS and the CPM for review and final approval. No site mobilization or construction-related ground disturbance, grading, boring, or trenching shall commence until an approved Designated Biologist is available to be on site. If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to the CPM at least 10 working days prior to the termination or release of the preceding Designated Biologist. In an emergency, the project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to the CPM and for consideration.			
DF BIO-2: Designated Biologist Duties. The project owner shall ensure that the Designated Biologist(s) performs the activities described below during any pre- construction site mobilization and construction, commissioning, or other activities that may impact biological resources. The Designated Biologist may be assisted by the approved Biological Monitor(s) but remains the contact for the project owner and the CPM. The Designated Biologist, or project owner if no Designated Biologist is available, duties, shall include the following: 1. Advise the project owner's Construction and Operation Managers and the CPM on the implementation of the biological resources Conditions of Certification; 2. Consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) to be submitted by the project owner; 3. Be available to supervise, conduct and coordinate mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special-status species or their habitat; 4. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and Conditions; 5. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (e.g., parking lots) for animals in harm's way;	The Designated Biologist shall provide copies of all written reports, email communications and summaries that document biological resources compliance activities in the Monthly Compliance Reports submitted to the CPM. If actions may affect biological resources during operation a Designated Biologist shall be available for monitoring and reporting. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report unless his or her duties cease, as approved by the CPM.			

NOTE: [3] USFWS <www.fws.gov/ventura/speciesinfo/protocols_guidelines/docs/dt> designates biologists who are approved to handle tortoises as "Authorized Biologists." Such biologists have demonstrated to the USFWS that they possess sufficient desert tortoise knowledge and experience to handle and move tortoises appropriately, and have received USFWS approval. Authorized Biologists are responsible for the implementation of all desert tortoise measures for which a project is approved and are permitted to then approve specific monitors to handle tortoises, at their discretion. The California Department of Fish and Wildlife (CDFW) must also approve such biologists, potentially including individual approvals for Biological Monitors approved by the Authorized Biologist. Designated Biologists are the equivalent of Authorized Biologists. Only Designated Biologists and certain Biological Monitors who have been approved by the Designated Biologist would be allowed to handle desert tortoises.

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
6. Notify the project owner and the CPM within 24 hours of any non-compliance with any biological resources Conditions of Certification, injury or mortality of a special status species, or if more than six injured or dead birds or bats are located onsite at one time, and collect all data necessary to document such events, such as GPS location, photographs, and observations necessary to develop a comprehensive report; 7. Respond directly to inquiries of the CPM or responsible Energy Commission staff regarding biological resource issues, and provide or collect reasonably available data upon CPM request, including information as specified in **BIO-2** #6; 8. Respond to reports of onsite kit fox mortality or injury, and to the extent possible, reports of dead or injured kit fox offsite and immediately adjacent the project boundaries or on access roads in accordance with Conditions of Certification **BIO-17**, fully document and record the event and collect pertinent data, and undertake restorative and/or disease prevention actions as specified within the American Badger and Kit Fox Management Plan prepared in accordance with Condition of Certification **BIO-17**. 9. Maintain written records of the tasks specified above and those included in the BRMIMP. Summaries of these records shall be submitted in the Monthly Compliance Report and the Annual Compliance Report; 10. Train the Biological Monitors as appropriate, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training, and USFWS guidelines on desert tortoise surveys and handling procedures <www.fws.gov/ventura/speciesinfo/protocols_guidelines>, as well as all terms and conditions of the Biological Opinion; and 11. Maintain the ability to be in regular, direct communication with representatives of CDFW, USFWS, and the CPM, including notifying these agencies of dead or injured listed species and reporting special-status species observations to the California Natural Diversity Data Base.				
DF BIO-3: Biological Monitor Selection and Qualifications. The project owner's approved Designated Biologist shall submit the resume, at least three references, and contact information of the proposed Biological Monitors to the CPM. The resume shall demonstrate, to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks. The Biological Monitor is the equivalent of the USFWS designated Desert Tortoise Monitor (USFWS 2008). Biological Monitor(s) training by the Designated Biologist shall include familiarity with the Conditions of Certification, BRMIMP, WEAP, and USFWS guidelines on desert tortoise surveys and handling procedures <www.fws.gov/ventura/speciesinfo/protocols_guidelines>.	The project owner shall submit the specified information to the CPM for approval at least 45 days prior to the start of any site mobilization or construction activities. The Designated Biologist shall submit a written statement to the CPM confirming that individual Biological Monitor(s) has been trained including the date when training was completed. If additional biological monitors are needed during construction the specified information shall be submitted to the CPM and for approval at least 10 days prior to their first day of monitoring activities.			
DF BIO-4: Biological Monitor Duties. The Biological Monitors shall assist the Designated Biologist(s) in conducting surveys and in monitoring of site mobilization, and construction related ground disturbance, site preparation, or permanent installation activities, including installation of desert tortoise exclusion fencing or reporting responsibilities. The Designated Biologist shall remain the contact for the project owner and the CPM, however, biological monitors will also respond directly to inquiries of the CPM or other responsible Energy Commission staff regarding biological resource issues, and collect and provide reasonably available information as requested by the CPM.	The Designated Biologist shall submit in the Monthly Compliance Report to the CPM and copies of all written reports and summaries that document biological resources compliance activities, including those conducted by Biological Monitors. If actions may affect biological resources during operation a Biological Monitor, under the supervision of the Designated Biologist, shall be available for monitoring and reporting. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report unless their duties cease, as approved by the CPM.			
DF BIO-5: Designated Biologist and Biological Monitor Authority. The project owner's construction/operation manager shall act on the advice of the Designated Biologist, Biological Monitor(s), and CPM to ensure conformance with the Biological Resources Conditions of Certification. The project owner shall provide Energy Commission staff with reasonable access to the project site under the control of the project owner and shall otherwise fully cooperate with the Energy Commission's efforts to verify the project owner's compliance with, or the effectiveness of, mitigation measures set forth in the Conditions of Certification. The Designated Biologist shall have the authority to immediately stop any activity that is not in compliance with these conditions and/or order any reasonable measure to avoid take of an individual of a listed species. If required by the Designated Biologist the project owner's construction/operation manager shall halt all site mobilization, and construction, including ground disturbance, site preparation, or permanent installation activities, including installation of desert tortoise exclusion fencing and operation activities in areas specified by the Designated Biologist. During operations, or when the Designated Biologist and/or Biological Monitors are not onsite, the following provisions are the project owner's responsibility The Designated Biologist shall: 1. Require a halt to all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued; 2. Inform the project owner, the construction/operation manager, and the CPM when to resume activities; and 3. Notify the CPM immediately if there is a halt of any activities and advise them of any corrective actions that have been taken or would be instituted as a result of the work stoppage. If the work stoppage relates to desert tortoise or any other federal or state-listed species, the Palm Springs Office of USFWS and the Ontario Office of CDFW shall also be notified. If the Designated Biologist is unavailable for direct consultation, the Biological Monitor shall act on behalf of the Designated Biologist.	The project owner shall ensure that the Designated Biologist or Biological Monitor notifies the CPM and BLM immediately (and no later than the morning following the incident, or Monday morning in the case of a weekend) of any non-compliance or a halt of any site mobilization, ground disturbance, grading, construction, and operation activities, via phone and email. If the non-compliance or halt to construction or operation relates to desert tortoise or any other federal or state-listed species, the project owner shall notify the Palm Springs Office of USFWS and Ontario Office of CDFW at the same time. The project owner shall notify the CPM of the circumstances and actions being taken to resolve the problem. Whenever corrective action is taken by the project owner, a determination of success or failure would be made by the CPM in consultation with BLM, USFWS and CDFW**,** within 5 working days after receipt of notice that corrective action is completed, or the project owner would be notified by the CPM that coordination with other agencies would require additional time before a determination can be made.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
DF BIO-6: Worker Environmental Awareness Program (WEAP). The project owner shall develop and implement a Blythe Project-specific Worker Environmental Awareness Program (WEAP) and shall secure approval for the WEAP from the CPM. The project owner shall also provide the, USFWS and CDFW a copy of all portions of the WEAP relating to desert tortoise and any other federal or state-listed species for review and comment. The WEAP shall be administered to all onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site mobilization, construction, commissioning, operation, non-operation, and closure. The WEAP shall: 1. Be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation in which supporting written material and electronic media, including photographs of protected species, is made available to all participants; 2. Discuss the locations and types of sensitive biological resources on the project site and adjacent areas, and explain the reasons for protecting these resources; provide information to participants that no snakes, reptiles, or other wildlife shall be intentionally harmed (unless posing a reasonable and immediate threat to humans); 3. Place special emphasis on desert tortoise, including pictures and information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures; 4. Provide pictures of desert tortoise, golden eagles, American badger, desert kit fox, Mojave fringe-toed lizard, and burrowing owl, provide information on sensitivity to human activities, legal protection, reporting requirements, and how to identify construction avoidance zones for these species as marked by flagging, staking, or other means, also describe the protections for bird nests and provide information as described above; 5. Provide overview for staff of potential impacts to reptiles and amphibians from vehicle strikes on all project roads (paved and unpaved) during construction operations, closure phases, reporting requirements, and protection measures; 6. Include a discussion of fire prevention measures to be implemented by workers during project activities; request workers to: a) dispose of cigarettes and cigars appropriately and not leave them on the ground or buried, b) keep vehicles on graveled, cleared or well-maintained ground at all times to prevent vehicle exhaust systems from coming in contact with roadside weeds, c) use and maintain approved spark arresters on all power equipment, and d) keep a fire extinguisher on hand at all times; 7. Describe the temporary and permanent habitat protection measures to be implemented at the project site; 8. Identify whom to contact if there are further comments and questions about the material discussed in the program; and 9. Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines. The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist and documented within the Monthly Compliance Report.	At least 45 days prior to site mobilization and construction the project owner shall provide to the CPM for review and approval and to BLM, USFWS, and CDFW a copy of the final WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program. The project owner shall provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least 10 days prior to site mobilization and construction the project owner shall submit two copies of the final WEAP and implement the training for all workers. Training acknowledgement forms signed during construction shall be kept on file by the project owner for at least 6 months after the start of commercial operation. Throughout the life of the project, the WEAP shall be repeated annually for permanent employees, and shall be routinely administered within one week of arrival to any new construction personnel, foremen, contractors, subcontractors, and other personnel potentially working within the project area. Upon completion of the orientation, employees shall sign a form stating that they attended the program and understand all protection measures. These forms shall be maintained by the project owner and shall be made available to the CPM, BLM, USFWS, and CDFW and upon request. Workers shall receive and be required to visibly display a hardhat sticker or certificate that they have completed the training. During project operation, signed statements for operational personnel shall be kept on file for six months following the termination of an individual's employment.			
DF BIO-7: Biological Resources Mitigation Implementation and Monitoring Plan. The project owner shall develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), and shall submit two copies of the proposed BRMIMP to the CPM for review and approval. The project owner shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate avoidance and minimization measures described in final versions of the Desert Tortoise Relocation Translocation Plan, the USFWS Biological Opinion, the Raven Management Plan, the Closure, Conceptual Restoration Plan, the American Badger and Desert Kit Fox Management Plan, the Burrowing Owl Mitigation and Monitoring Plan, the Weed Management Plan, and all other biological mitigation and/or monitoring plans associated with the project. The project owner shall provide to BLM, CDFW, and USFWS a copy of all portions of the BRMIMP relating to desert tortoise and any other federal or state-listed species for review and comment. The BRMIMP shall be prepared in consultation with the Designated Biologist and shall include accurate and up-to-date maps depicting the location of sensitive biological resources that require temporary or permanent protection during construction and operation. The BRMIMP shall include complete and detailed descriptions of the following: 1. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the project owner; 2. All biological resources Conditions of Certification identified as necessary to avoid or mitigate impacts; 3. All biological resource mitigation, monitoring and compliance measures required in federal agency terms and conditions, such as those provided in the USFWS Biological Opinion; 4. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation, and closure; 5. All required mitigation measures for each sensitive biological resource, including remedial actions for standing water onsite in accordance with Conditions of Certification **BIO-8** and known or suspected disease outbreaks on the project site in accordance with Condition of Certification **BIO-17**;	The project owner shall submit the draft BRMIMP to the CPM at least 60 days prior to start of any site mobilization and construction-related ground disturbance, grading, boring, and trenching. At the same time, the project owner shall provide to BLM, CDFW, and USFWS a copy of all portions of the draft BRMIMP relating to desert tortoise and any other federal or state-listed species. The project owner shall provide the final BRMIMP to the CPM, BLM, CDFW, and USFWS at least 30 days prior to the start of any site mobilization and construction, grading, boring, or trenching. The BRMIMP shall contain all of the required measures included in all biological conditions of certification. No site mobilization or-construction-related ground disturbance, grading, boring or trenching may occur prior to approval of the final BRMIMP by the CPM. If any permits have not yet been received when the final BRMIMP is submitted, these permits shall be submitted to the CPM within 5 days of their receipt, and the BRMIMP shall be revised or supplemented to reflect the permit condition(s). The project owner shall submit to the CPM the revised or supplemented BRMIMP within 10 days following the project owner's receipt of any additional permits. Under no circumstances shall ground disturbance proceed without implementation of all permit conditions. To verify that the extent of construction disturbance does not exceed that described in these conditions, the project owner shall submit aerial photographs, at an approved scale, taken before and after construction to the CPM, BLM, USFWS, and CDFW. The first set of aerial photographs shall reflect site conditions prior to any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching, and shall be submitted prior to initiation of such activities. The second set of aerial photographs shall be taken subsequent to completion of construction, and shall be submitted to the CPM, BLM, USFWS, and CDFW no later than 90 days after completion of construction. The project owner shall also			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
6. Aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities; include one set prior to any site or related facilities mobilization disturbance and one set subsequent to completion of project construction. Provide planned timing of aerial photography and a description of why times were chosen. Provide a final accounting of the before/after whole acreages and a determination of whether more or less habitat compensation is necessary in the Construction Termination Report prepared in accordance with **BIO-28**; 7. All measures that shall be taken to avoid or mitigate temporary disturbances from construction activities; 8. Duration for each type of monitoring and a description of monitoring methodologies and frequency; 9. Performance standards to be used to help decide if/when proposed mitigation is or is not successful; 10. All performance standards and remedial measures to be implemented if performance standards are not met; 11. Biological resources-related facility closure measures including a description of funding mechanism(s); 12. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval; and 13. A requirement to submit any sightings of any special-status species that are observed on or in proximity to the project site, or during project surveys, to the California Natural Diversity Data Base CNDDB per CDFW requirements.	provide a final accounting in whole acres of vegetation communities/cover types present before and after construction. Construction acreages shall be rounded to the nearest acre. Any changes to the approved BRMIMP must be approved by the CPM in consultation with BLM, CDFW, and USFWS. Implementation of BRMIMP measures (for example, construction activities that were monitored, species observed) shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying which items of the BRMIMP have been completed, a summary of all modifications to mitigation measures made during the project's site mobilization and construction activities, and which mitigation and monitoring items are still outstanding.			
DF BIO-8: Impact Avoidance and Minimization Measures. The project owner shall undertake the following measures to manage the project site and related facilities during site mobilization, operation and maintenance in a manner to avoid or minimize impacts to biological resources: 1. ***Limit Disturbance Areas.*** Minimize soil disturbance by locating staging areas, laydown, and temporary parking or storage for linear facilities in existing disturbed areas. Equipment maintenance and refueling shall not be conducted with 100 feet of any sensitive resource (for example, waters of the state, creosote bush–big galleta association, desert dry wash woodland, unvegetated ephemeral dry wash, dune habitats, and rare plant populations). Limit the width of the work area near sensitive resources. Avoid blading temporary access roads where feasible and instead drive over and crush the vegetation to preserve the seed bank and biotic soil crusts. The boundaries of all areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to site mobilization and construction activities in consultation with the Designated Biologist. Spoils and topsoil shall be stockpiled in disturbed areas lacking native vegetation and which do not provide habitat for special-status species. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat. All disturbances, project vehicles and equipment shall be confined to the flagged areas. 2. ***Minimize Road Impacts.*** New and existing roads that are planned for construction, widening, or other improvements shall not extend beyond the flagged impact area as described above. All vehicles passing or turning around would do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction. 3. ***Minimize Traffic Impacts.*** Vehicular traffic during project construction and operation shall be confined to existing routes of travel to and from the project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit shall not exceed 25 miles per hour within the project area, on dirt maintenance roads for linear facilities, or on dirt access roads to the project site. Private paved roads shall not exceed 45 mph; speed limits will be lowered during the tortoise's most active period (April through May and September through October [USFWS 2010]) to 35 miles per hour. The speed limit within 3 miles of the Colorado River Substation will be posted at 10 mph. Speed limit signs shall be posted on new access roads to the site. 4. ***Salvage or Relocate Wildlife during Ground Disturbance Activities.*** The Designated Biologist or Biological Monitor shall salvage or relocate sensitive wildlife during ground disturbance activities including clearing, grubbing, and grading operations when feasible to off-site habitat or out of harm's way. The species shall be salvaged or relocated when conditions will not jeopardize the health and safety of the monitor. 5. ***Monitor During Construction.*** In areas that have not been fenced with desert tortoise exclusion fencing and cleared, the Designated Biologist shall be present at the construction site during all project activities that have potential to disturb soil, vegetation, and wildlife. Upon completion of desert tortoise fencing installation and clearing the Designated Biologist or Biological Monitor shall be present at the construction site during all Project activities that have potential to disturb soil, vegetation, and wildlife. The Designated Biologist or Biological Monitor shall clear ahead of equipment during brushing and grading activities. If desert tortoise are found during construction monitoring, procedures outlined in **BIO-9** shall be implemented. 6. ***Minimize Impacts of Transmission/Pipeline Alignments, Roads, and Staging Areas.*** Staging areas for construction on the plant site shall be within the area that has been fenced with desert tortoise exclusion fencing and cleared. For construction activities outside of the plant site (transmission line, pipeline alignments) access roads, pulling sites, and storage and parking areas shall be designed, installed, and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) S*uggested Practices for Avian Protection on Power Lines* (APLIC 1994) and	All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures would be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed. As part of the Annual Compliance Report each year following construction, the Designated Biologist shall provide a report to the CPM that describes compliance with avoidance and minimization measures to be implemented during construction, operation, and maintenance (for example a summary of the incidence of road-killed animals during the year, implementation of measures to avoid toxic spills, erosion and sedimentation, efforts to enforce worker guidelines, etc.). No less than 30 days prior to site mobilization and construction, the project owner shall submit to the CPM, BLM, and CDFW a final agency-approved Revegetation Plan that has been reviewed and approved by the CPM in consultation with BLM. All modifications to the Revegetation Plan shall be made only after approval from the CPM. Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Revegetation Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding. As part of the Annual Compliance Report, each year following construction until the completion of the revegetation monitoring specified in the Revegetation Plan, the Designated Biologist or project owner shall provide a report to the CPM that includes: a summary of revegetation activities for the year, a discussion of whether revegetation performance standards for the year were met; and recommendations for revegetation remedial action, if warranted, are planned for the upcoming year. If loud construction activities are proposed between February 15 and April 15 which would result in noise levels over 65 dBA in nesting habitat, the project owner shall submit nest survey results (as described in 8a) to the CPM no more than 7 days before initiating such construction. If an active nest is detected within this survey area the project owner shall submit a Nesting Bird Monitoring and Management Plan to the CPM for review and approval no more than 7 days before initiating noisy construction.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
Mitigating Bird Collisions with Power Lines (APLIC 2004) to reduce the likelihood of large bird electrocutions and collisions. Where feasible, avoid impacts to desert washes and special-status plants by adjusting the locations of poles and laydown areas, and the alignment of the roads and pipelines. Construction drawings and grading plans shall depict the locations of sensitive resources and demonstrate where temporary impacts to sensitive resources can be avoided and where they cannot. 7. ***Avoid Use of Toxic Substances.*** Soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants. Anticoagulants shall not be used for rodent control. Pre-emergents and other herbicides with documented residual toxicity shall not be used. Herbicides shall be applied in conformance with federal, State, and local laws and according to the guidelines for wildlife-safe use of herbicides in **BIO-14** (Weed Management Plan). 8. ***Minimize Lighting Impacts.*** Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards wildlife habitat. 9. ***Minimize Noise Impacts.*** Loud construction activities (e.g., hydraulic ram, or other) shall be avoided from February 15 to April 15 when it would result in noise levels over 65 dBA in nesting habitat (excluding noise from passing vehicles). Loud construction activities may be permitted from February 15 to April 15 only if: a. the Designated Biologist provides documentation (i.e., nesting bird data collected using methods described in **BIO-15** and maps depicting location of the nest survey area in relation to noisy construction) to the CPM indicating that no active nests would be subject to 65 dBA noise, OR b. the Designated Biologist or Biological Monitor monitors active nests within the range of construction-related noise exceeding 65 dBA. The monitoring shall be conducted in accordance with Nesting Bird Monitoring and Management Plan approved by the CPM. The Plan shall include adaptive management measures to prevent disturbance to nesting birds from construction related noise. Triggers for adaptive management shall be evidence of project-related disturbance to nesting birds such as: agitation behavior (displacement, avoidance, and defense); increased vigilance behavior at nest sites; changes in foraging and feeding behavior, or nest site abandonment. The Nesting Bird 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 Designated Biologist to be the source of disturbance to the nesting bird. 10. ***Avoid Vehicle Impacts to Desert Tortoise.*** Parking and storage shall occur within the area enclosed by desert tortoise exclusion fencing to the extent feasible. No vehicles or construction equipment parked outside the fenced area shall be moved prior to an inspection of the ground beneath the vehicle for the presence of desert tortoise. If a desert tortoise is observed outside the areas permanently fenced with desert tortoise exclusion fencing, it shall be left to move on its own. If it does not move within 15 minutes, a Designated Biologist or Biological Monitor under the Designated Biologist's direct supervision may move it out of harm's way as described in the USFWS Desert Tortoise Field Manual (USFWS 2009). 11. ***Avoid Wildlife Pitfalls.*** To avoid trapping desert tortoise and other wildlife in trenches, pipes or culverts, the following measures shall be implemented: a. *Backfill Trenches.* At the end of each work day, the Designated Biologist or Biological Monitor shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the area fenced with desert tortoise exclusion fencing have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with desert tortoise-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with desert tortoise exclusion fencing shall be inspected periodically throughout the day, at the end of each workday and at the beginning of each day by the Designated Biologist or a Biological Monitor. Should a tortoise or other wildlife become trapped, the Designated Biologist or Biological Monitor move it out of harm's way as described in the most recent USFWS Desert Tortoise Field Manual (currently USFWS 2009). Any other wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed. b. *Avoid Entrapment of Desert Tortoise.* Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches, stored less than 8 inches aboveground and within desert tortoise habitat (i.e., outside the permanently fenced area) for one or more nights, shall be inspected for tortoises before the material is moved, buried or capped. As an alternative, all such structures may be capped before being stored outside the fenced area, or placed on elevated pipe racks. These materials would not need to be inspected or capped if they are stored within the permanently fenced area after the clearance surveys have been completed. 12. ***Minimize Standing Water.*** Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and shall take appropriate action to reduce water application where necessary. 13. ***Dispose of Road-killed Animals.*** Road killed animals or other carcasses detected by personnel on roads associated with the project area shall be reported immediately to a Designated Biologist, Biological Monitor or Project Environmental Compliance Manager who will promptly remove the roadkill for disposal (i.e. removal to a				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
landfill or disposal at the BSPP facility). For special-status species roadkill, the Biological Monitor shall contact the CPM, CDFW and USFWS within 1 working day of detection (within 8 hours in the case of a desert kit fox) of the carcass for guidance on disposal or storage of the carcass; all other roadkill shall be disposed of promptly, or as directed by the USFWS or CDFW. Handling of desert kit fox carcasses shall follow handling requirements included in the **BIO-17** American Badger and Kit Fox Management Plan. The Biological Monitor shall provide the special-status species record as described in **BIO-11** below. 14. ***Minimize Spills of Hazardous Materials.*** All vehicles and equipment shall be maintained in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The Designated Biologist shall be informed of any hazardous spills immediately as directed in the Project Hazardous Materials Plan. Hazardous spills shall be immediately cleaned up and the contaminated soil properly disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated area. Service/maintenance vehicles shall carry a bucket and pads to absorb leaks or spills. 15. ***Worker Guidelines.*** During construction all trash and food-related waste shall be placed in self-closing containers and removed daily from the site. Workers shall not feed wildlife or bring pets to the project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons. 16. ***Avoid Spread of Noxious Weeds.*** The project owner shall implement the following Best Management Practices during construction and operation, and all other measures as required in the final approved Weed Management Plan (**BIO-14**) to prevent the spread and propagation of noxious weeds and other invasive plants: a. For work outside the project facility fence line limit the size of any vegetation and/or ground disturbance and limit ingress and egress to defined routes; b. Prevent spread of non-native plants via vehicular sources by implementing Trackclean™ or other methods of vehicle cleaning for vehicles getting into and out of the construction sites. Earth-moving equipment shall be cleaned prior to transport to the construction site; and c. Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations. 17. ***Implement Erosion Control Measures.*** Standard erosion control measures shall be implemented for all phases of construction and operation where sediment run-off from exposed slopes threatens to enter "Waters of the State". Sediment and other flow-restricting materials shall be moved to a location where they shall not be washed back into the stream. All disturbed soils and roads within the project site shall be stabilized to reduce erosion potential, both during and following construction. Areas of disturbed soils (access and staging areas) which slope toward drainages shall be stabilized to reduce erosion potential. 18. ***Monitor Ground Disturbing Activities Prior to Pre-Construction Site Mobilization.*** If pre-construction site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife. 19. ***Implement Erosion Control Measures.*** All disturbed soils and roads within the Project site shall be stabilized to reduce erosion potential, both during and following construction. All areas subject to temporary disturbance shall be restored to pre-project grade and stabilized to prevent erosion and promote natural revegetation. Temporarily disturbed areas within the Project area include, but are not limited to: linear facilities, temporary access roads, temporary lay-down and staging areas. If erosion control measures include the use of seed, only locally native plant species from a local seed source shall be used. Local seed includes seeds from plants within the Chuckwalla Valley or Colorado River Hydrologic Units. 20. ***Avoid Spreading Weeds.*** Prior to the start of site mobilization and construction, flag and avoid dense populations of highly invasive noxious weeds. If these areas cannot be avoided, they shall be pre-treated by the methods described in **BIO-14** (Weed Management Plan). Noxious weeds and other invasive non-native plants in the temporarily disturbed areas shall be managed according to the requirements in **BIO-14**. 21. ***Salvage Topsoil.*** Topsoil from native desert areas to be temporarily disturbed (other than existing roads that have already been disturbed from previous construction activities) shall be salvaged, preserved and re-used for restoration of temporarily disturbed areas, except where less invasive methods are used to maintain soil seed banks, functioning and root crowns (e.g., drive over/crush method). Salvaged topsoil shall be collected, stored and applied in a way that maintains the viability of seed and soil crusts. The project owner shall excavate and collect the upper soil layer (the top 1 to 2 inches that includes the seed bank and biotic soil crust) as well as the lower soil layer in accordance with the Project's Revegetation Plan. The upper and lower soil layers shall be stockpiled separately in areas that will not be impacted by other grading, flooding, erosion, or pollutants. If the soil is to be stored more than 2 weeks it shall be spread out to a depth of no more than approximately 6 inches to maintain the seed and soil crust viability, unless that storage would create increase disturbance to undisturbed surfaces. As needed, the project owner shall install temporary construction fencing around stockpiled topsoil, and signage that indicates whether the pile is the upper layer seed bank, or the lower layer, and clearly indicates that the piles are for use only in erosion control. After construction, the project owner shall replace the topsoil in the temporarily disturbed areas in the reverse order of stockpiling, subsoil, and then the seed-containing upper layer of topsoil.				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
22. ***Revegetation of Temporarily Disturbed Areas.*** The project owner shall prepare and implement a Revegetation Plan to restore all areas subject to temporary disturbance to pre-project grade and conditions. Temporarily disturbed areas within the project area include, but are not limited to: all proposed locations for linear facilities, temporary access roads, construction work temporary lay-down areas, and construction equipment staging areas. The Revegetation Plan shall include a description of topsoil salvage and seeding techniques and a monitoring and reporting plan, and the following performance standards by the end of monitoring year 2: a. at least 80 percent of the species observed within the temporarily disturbed areas shall be native species that naturally occur in desert scrub habitats; and b. relative cover and density of plant species within the temporarily disturbed areas shall equal at least 60 percent. 23. ***Decommission Temporary Access Roads with Vertical Mulching.*** Discourage ORV use of temporary construction roads by installing vertical mulching at the head of the road to a distance necessary to obscure the road from view, when the road is no longer in use for construction. Construction roads that are used infrequently will be blocked by barricades that can be easily removed for access by construction personnel, until they are no longer used. Boulder barricades and gates shall not be used for permanent vertical mulch unless the remainder of the site is fenced to prevent driving around the gate or barricade. Designated ORV routes and roads shall not be closed.				
DF BIO-9: Desert Tortoise Clearance Surveys and Fencing. The project owner shall undertake appropriate measures to manage the project site and related facilities in a manner to avoid or minimize impacts to desert tortoise**.** Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the most recent USFWS Desert Tortoise Field Manual or more current guidance provided by CDFW and USFWS. The project owner shall also implement all terms and conditions described in the Biological Opinion prepared by USFWS. The project owner shall implement the following measures: 1. ***Desert Tortoise Exclusion Fence Installation.*** To avoid impacts to desert tortoises, permanent exclusion fencing shall be installed along the permanent perimeter security fence (boundaries) as phases are constructed. Temporary fencing shall be installed along any subset of the plant site phasing that does not correspond to permanent perimeter fencing. Temporary fencing shall be installed along linear features unless a Biological Monitor is present in the immediate vicinity of construction activities for the linear facility. All permanent or temporary fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the desert tortoise exclusionary fence and utility rights-of-way alignments shall be conducted by the Designated Biologist(s) or Biological Monitors (with direct contact to the Designated Biologist) using techniques outlined in the current USFWS *Desert Tortoise Field Manual* and may be conducted in any season with USFWS and CDFW approval. Biological Monitors may assist the Designated Biologist under his or her direct supervision. These fence clearance surveys shall provide 100-percent coverage of all areas to be disturbed and an additional transect along both sides of the fence line. Disturbance associated with desert tortoise exclusionary fence construction shall not exceed 30 feet on either side of the proposed fence alignment. Prior to the surveys the project owner shall provide to the CPM, BLM, CDFW and USFWS a figure clearly depicting the limits of construction disturbance for the proposed fence installation. The fence line survey area shall be 90 feet wide centered on the fence alignment. Where construction disturbance for fence line installation can be limited to 15 feet on either side of the fence line, this fence line survey area may be reduced to an area approximately 60 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. Desert tortoise located within the utility ROW alignments shall be moved out of harm's way in accordance with the current USFWS *Desert Tortoise Field Manual*. Any desert tortoise detected during clearance surveys for fencing within the project site and along the perimeter fence alignment shall be translocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan (**BIO-10**). Tortoise shall be handled by the Designated Biologist(s) in accordance with the current USFWS *Desert Tortoise Field Manual*. a. *Timing, Supervision of Fence Installation.* The exclusion fencing shall be installed in any area subject to disturbance prior to the onset of site clearing and grubbing in that area. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present. b. *Fence Material and Installation.* All desert tortoise exclusionary fencing shall be constructed in accordance with the current USFWS' *Desert Tortoise Field Manual* or the most recent agency guidance with the approval of the CPM. c. *Security Gates.* Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates may be electronically activated to open and close immediately after the vehicle(s) have entered or exited to prevent the gates from being kept open for long periods of time. d. *Fence Inspections.* Following installation of the desert tortoise exclusion fencing for both the permanent site fencing and temporary fencing in the utility corridors, the fencing shall be regularly inspected. If tortoise were moved out of harm's way during fence construction, permanent and temporary fencing shall be inspected at least two times a day for the first 7 days to ensure a recently moved tortoise has not been trapped within the fence. Thereafter, permanent fencing shall be inspected monthly and during and within 24 hours following all major rainfall events. A major rainfall event is defined as one for which flow is detectable within the fenced	All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to BLM, the CPM, USFWS, and CDFW describing implementation of each of the mitigation measures listed above. The report shall include the desert tortoise survey results, capture and release locations of any relocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
drainage. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within 48 hours of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing shall be inspected weekly and, where drainages intersect the fencing, during and within 24 hours following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the Designated Biologist shall inspect the area for tortoise. 2. ***Desert Tortoise Clearance Surveys within the Plant Site.*** Clearance surveys shall be conducted in accordance with the current USFWS *Desert Tortoise Field Manual* and shall consist of two surveys covering 100 percent the project area by walking transects no more than 15-feet apart. If a desert tortoise is located on the second survey, a third survey shall be conducted. To maximize the opportunity to find all tortoises each separate survey shall be walked in a different direction, in opposite directions, and/or offset to allow opposing angles of observation, or as directed in the Biological Opinion. Clearance surveys of the plant site may only be conducted when tortoises are most active (April through May or September through October) unless the project receives approval from CDFW and USFWS. Clearance surveys of linear features may be conducted during anytime of the year. Surveys outside of the active season require approval by USFWS and CDFW. Any tortoise located during clearance surveys of the power plant site and linear features shall be translocated or relocated and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan: a. *Burrow Searches.* During clearance surveys all desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined by the Designated Biologist, who may be assisted by the Biological Monitors, to assess occupancy of each burrow by desert tortoises and handled in accordance with the current USFWS *Desert Tortoise Field Manual*. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined in accordance with the Desert Tortoise Relocation/Translocation Plan. Tortoises taken from burrows and from elsewhere on the power plant site shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan. b. *Burrow Excavation/Handling.* All potential desert tortoise burrows located during clearance surveys would be excavated by hand, tortoises removed, and collapsed or blocked to prevent occupation by desert tortoises in accordance with the Desert Tortoise Relocation/Translocation Plan. All desert tortoise handling, and removal, and burrow excavations, including nests, would be conducted by the Designated Biologist, who may be assisted by a Biological Monitor in accordance with the current USFWS *Desert Tortoise Field Manual.* 3. ***Monitoring Following Clearing.*** Following the desert tortoise clearance and removal from the power plant site and utility corridors, workers and heavy equipment shall be allowed to enter the project site to perform clearing, grubbing, leveling, and trenching activities. A Designated Biologist or Biological Monitor shall be onsite for clearing and grading activities to move tortoises missed during the initial tortoise clearance survey. Should a tortoise be discovered, it shall be relocated or translocated as described in the Desert Tortoise Relocation/Translocation Plan. 4. ***Reporting.*** The Designated Biologist shall record the following information for any desert tortoises handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled desert. Desert tortoise moved from within project areas shall be marked and monitored in accordance with the Desert Tortoise Relocation/Translocation Plan.				
DF BIO-10: Desert Tortoise Relocation/Translocation Plan. The project owner shall develop and implement a final Desert Tortoise Relocation/Translocation Plan (Plan) that is consistent with current USFWS approved guidelines, and meets the approval of the CPM. The Plan shall include guidance specific to each of the 4 phases of project construction, as described in **BIO-28** (Phasing), and shall include measures to minimize the potential for repeated translocations of individual desert tortoises. The goals of the Desert Tortoise Relocation/Translocation Plan shall be to relocate or translocate all desert tortoises from the project site to nearby suitable habitat; minimize impacts on resident desert tortoises outside the project site; minimize stress, disturbance, and injuries to relocated/translocated tortoises; and assess the success of the relocation/translocation effort through monitoring. The final Plan shall be based on the draft Desert Tortoise Relocation/Translocation Plan prepared by the project owner and shall include all revisions deemed necessary by BLM, USFWS, CDFW and the Energy Commission staff.	At least 60 days prior to site mobilization and construction the project owner shall provide the CPM with the final version of a Desert Tortoise Relocation/Translocation Plan that has been reviewed and approved by the CPM in consultation with BLM, USFWS and CDFW. All modifications to the approved Plan shall be made only after approval by the CPM, in consultation with BLM, USFWS and CDFW. Within 30 days after initiation of relocation and/or translocation activities, the Designated Biologist shall provide to the CPM for review and approval, a written report identifying which items of the Plan have been completed, and a summary of all modifications to measures made during implementation of the Plan.			
DF BIO-11: Desert Tortoise Compliance Verification. The project owner shall provide Energy Commission, CDFW, and USFWS and BLM staff with reasonable access to the project site and compensation lands under the control of the project owner and shall otherwise fully cooperate with the Energy Commission's and BLM's efforts to verify the project owner's compliance with, or the effectiveness of, mitigation measures set forth in the Conditions of Certification. The Designated Biologist shall do all of the following: 1. ***Notification.*** Notify the CPM at least 14 calendar days before initiating site mobilization and construction activities; immediately notify the CPM in writing if the project owner is not in compliance with any conditions of certification, including but not limited to any actual or anticipated failure to implement mitigation measures within the time periods specified in the Conditions of Certification;	No later than 2 days following the above required notification of a sighting, kill, or relocation of a listed species, the project owner shall deliver to the CPM, BLM, CDFW, and USFWS via FAX or electronic communication the written report from the Designated Biologist describing all reported incidents of injury, kill, or relocation of a listed species, identifying who was notified, and explaining when the incidents occurred. In the case of a sighting in an active construction area, the project owner shall, at the same time, submit a map (e.g., using Geographic Information Systems) depicting both the limits of construction and sighting location to the CPM, BLM, CDFW and USFWS.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
2. ***Monitoring During Grubbing and Grading.*** Remain onsite daily while vegetation salvage, grubbing, grading and other ground-disturbance construction activities are taking place to avoid or minimize take of listed species and verify personally or use Biological Monitors, to check for compliance with all impact avoidance and minimization measures, including checking all exclusion zones to ensure that signs, stakes, and fencing are intact and that human activities are restricted in these protective zones. 3. ***Monthly Compliance Inspections.*** Conduct compliance inspections at a minimum of once per month after ground disturbance activities including clearing, grubbing, and grading are completed and submit a monthly compliance report to the BLM, CPM, USFWS and CDFW during construction. 4. ***Notification of Injured, Dead, or Relocated Listed Species.*** If an injured or dead listed or special status species is detected within or near the Project Disturbance area, the CPM, the Ontario Office of CDFW, and Palm Springs Office of USFWS shall be notified immediately by phone and email, or as otherwise directed by the CPM or, in the case of avian species, controlling permits as issued by the USFWS. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species (within 8 hours in the case of desert kit fox). Written follow-up notification via FAX or electronic communication shall be submitted to these agencies within two calendar days of the incident and include the following information as relevant: a. *Injured Desert Tortoise*. If a desert tortoise is injured as a result of project-related activities during construction, the Designated Biologist or approved Biological Monitor shall immediately take it to a CDFW-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by the project owner. Following phone notification as required above, the CPM, CDFW, and USFWS shall determine the final disposition of the injured animal, if it recovers. Written notification shall include, at a minimum, the date, time, location, circumstances of the incident, and the name of the facility where the animal was taken. b. *Desert Tortoise Fatality.* If a desert tortoise is killed by project-related activities during construction or operation, submit a written report with the same information as an injury report to the CPM, BLM, the Ontario Office of CDFW, and the Palm Springs Office of USFWS. These desert tortoises shall be salvaged according to guidelines described in *Salvaging Injured, Recently Dead, Ill, and Dying Wild, Free-Roaming Desert Tortoise* (Berry 2001) or most recent guidelines approved by the CPM. The project owner shall pay to have the desert tortoises transported and necropsied. The report shall include the date and time of the finding or incident. c. *Avian or bat injury or fatality.* Notifications of injured or dead avian and bat species found onsite must include relevant scientific data such as GPS locations, photographs, observations and other reasonably available information. 5. ***Final Listed Species Report.*** The Designated Biologist or project owner shall provide the CPM and BLM a Final Listed Species Mitigation Report that includes, at a minimum: 1) a copy of the table in the BRMIMP with notes showing when each of the mitigation measures was implemented; 2) all available information about Project-related incidental take of listed species; 3) information about other Project impacts on the listed species; 4) construction dates; 5) an assessment of the effectiveness of conditions of certification in minimizing and compensating for Project impacts; 6) recommendations on how mitigation measures might be changed to more effectively minimize and mitigate the impacts of future Projects on the listed species; and 7) any other pertinent information, including the level of take of the listed species associated with the Project 6. ***Stop Work Order.*** The CPM may issue the project owner a written stop work order to suspend any activity related to the construction or operation of the project to prevent or remedy a violation of one or more Conditions of Certification (including but not limited to failure to comply with reporting, monitoring, or habitat acquisition obligations) or to prevent the illegal take of an endangered, threatened, or candidate species. The project owner shall comply with the stop work order immediately upon receipt thereof.	No later than 45 days after initiation of project operation the Designated Biologist shall provide the CPM a Final Listed Species Mitigation Report. Beginning with the first month after clearing, grubbing, and grading are completed and continuing every month until construction is complete, the project owner shall submit a report describing their results of the Monthly Compliance Inspections to the CPM, BLM, USFWS, and CDFW.			
DF BIO-12: Desert Tortoise Compensatory Mitigation. To fully mitigate for habitat loss and potential take of desert tortoise, the project owner shall provide compensatory mitigation at a 1:1 ratio for impacts to 3,975 acres, per **BIO-28 – Table 1,** adjusted to reflect the final project footprint. For purposes of this Condition, the project footprint means all lands disturbed in the construction and operation of the Blythe Solar Power Project, including all project linears, as well as undeveloped areas inside the project's boundaries that will no longer provide viable long-term habitat for the desert tortoise. To satisfy this condition, the project owner shall acquire, protect and transfer 1 acre of desert tortoise habitat for every acre of habitat within the final project footprint, and provide associated funding for the acquired lands, as specified below. Condition **BIO-27** may provide the project owner with another option for satisfying some or all of the requirements in this Condition. In lieu of acquiring lands itself, the project owner may satisfy the requirements of this Condition by depositing funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as provided below in section 3.i. of this Condition. The timing of the mitigation shall correspond with the timing of the site disturbance activities as stated in **BIO-28** (phasing). If compensation lands are acquired in fee title or in easement, the requirements for acquisition, initial improvement and long-term management of compensation lands include all of the following:	If the mitigation actions required under this Condition are not completed prior to the start of ground-disturbing activities including site mobilization and construction, the project owner shall provide the CPM and CDFW with an approved form of Security in accordance with this Condition of Certification no later than 30 days prior to beginning project ground-disturbing activities, including site mobilization and construction. Actual Security shall be provided no later than 7 days prior to the beginning of project ground-disturbing activities. If Security is provided, the project owner, or an approved third party, shall complete and provide written verification to the CPM, CDFW, BLM and USFWS of the compensation lands acquisition and transfer within 18 months of the start of project ground-disturbing activities, including site mobilization and construction. The project owner may elect to fund the acquisition and initial improvement of compensation lands through NFWF or other approved third party by depositing funds for that purpose into NFWF's REAT Account. Initial deposits			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
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Biological Resources (cont.)				
1. ***Selection Criteria for Compensation Lands.*** The compensation lands selected for acquisition in fee title or in easement shall: a. be within the Colorado Desert Recovery Unit; b. provide habitat for desert tortoise with capacity to regenerate naturally when disturbances are removed; c. be prioritized near larger blocks of lands that are either already protected or planned for protection, such as the Chuckwalla DWMA, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation; d. not have a history of intensive recreational use, grazing or other disturbance that does not have the capacity to regenerate naturally when disturbances are removed or might make habitat recovery and restoration infeasible; e. not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration; f. not contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat; and g. have water and mineral rights included as part of the acquisition, unless the CPM, in consultation with CDFW, BLM and USFWS, agrees in writing to the acceptability of land. 2. ***Review and Approval of Compensation Lands Prior to Acquisition.*** The project owner shall submit a formal acquisition proposal to the CPM, CDFW, USFWS, and BLM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for desert tortoise in relation to the criteria listed above. Approval from the CPM and CDFW, in consultation with BLM and the USFWS, shall be required for acquisition of all compensatory mitigation parcels. 3. ***Compensation Lands Acquisition Requirements.*** The project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM and CDFW, in consultation with BLM and the USFWS, have approved the proposed compensation lands: a. *Preliminary Report.* The project owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM and CDFW. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM and CDFW, in consultation with BLM and the USFWS. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board. b. *Title/Conveyance.* The project owner shall transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement as required by the CPM and CDFW. Transfer of either fee title or an approved conservation easement will usually be sufficient, but some situations, e.g., the donation of lands burdened by a conservation easement to BLM, will require that both types of transfers be completed. Any transfer of a conservation easement or fee title must be to CDFW, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM under terms approved by the CPM and CDFW. If an approved non-profit organization holds title to the compensation lands, a conservation easement shall be recorded in favor of CDFW in a form approved by CDFW. If an approved non-profit holds a conservation easement, CDFW shall be named a third party beneficiary. If a Security is provided, the project owner or an approved third party shall complete the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities. c. *Initial Habitat Improvement Fund.* The project owner shall fund the initial protection and habitat improvement of the compensation lands. Alternatively, a non-profit organization may hold the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if it meets the approval of CDFW and the CPM. If CDFW takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFW or its designee. d. *Property Analysis Record.* Upon identification of the compensation lands, the project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate long-term maintenance and management fee to fund the in-perpetuity management of the acquired mitigation lands. e. *Long-term Maintenance and Management Fund.* In accordance with **BIO-28** (phasing), the project owner shall deposit in NFWF's REAT Account or with another CPM-approved entity a non-wasting capital long-term maintenance and management fee in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis conducted for the compensation lands. The CPM, in consultation with CDFW, may designate another non-profit organization to hold the long-term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity. If CDFW takes fee title to the compensation lands, CDFW shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFW and with CDFW supervision.	for this purpose must be made in the amounts in section 3h of this condition. Payment of the initial funds for acquisition and initial improvement must be made at least 30 days prior to the start of ground-disturbing activities for each phase. No fewer than 90 days prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to the CPM, CDFW, USFWS, and BLM describing the parcels intended for purchase and shall obtain approval from the CPM and CDFW prior to the acquisition. No fewer than 30 days after acquisition of the property the project owner shall deposit the funds required by Section 3e above (long term management and maintenance fee) and provide proof of the deposit to the CPM. The project owner, or an approved third party, shall provide the CPM, CDFW, BLM and USFWS with a management plan for the compensation lands within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with CDFW, BLM and the USFWS. Within 90 days after completion of all project related ground disturbance, the project owner shall provide to the CPM, CDFW, BLM and USFWS an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during project construction. This shall be the basis for the final number of acres required to be acquired.			

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		Initials	Date	Remarks
Biological Resources (cont.)				
a. *Interest, Principal, and Pooling of Funds.* The project owner, the CPM and CDFW shall ensure that an agreement is in place with the long-term maintenance and management fee holder/manager to ensure the following conditions: i. Interest. Interest generated from the initial capital long-term maintenance and management fee shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action approved by CDFW designed to protect or improve the habitat values of the compensation lands. ii. Withdrawal of Principal. The long-term maintenance and management fee principal shall not be drawn upon unless such withdrawal is deemed necessary by the CDFW or the approved third-party long-term maintenance and management fee manager to ensure the continued viability of the species on the compensation lands. If CDFW takes fee title to the compensation lands, monies received by CDFW pursuant to this provision shall be deposited in a special deposit fund established solely for the purpose to manage lands in perpetuity unless CDFW designates NFWF or another entity to manage the long-term maintenance and management fee for CDFW. iii. Pooling Long-Term Maintenance and Management Fee Funds. CDFW, or a CPM-and CDFW-approved non-profit organization qualified to hold long-term maintenance and management fees solely for the purpose to manage lands in perpetuity, may pool the endowment with other endowments for the operation, management, and protection of the compensation lands for local populations of desert tortoise. However, for reporting purposes, the long-term maintenance and management fee fund must be tracked and reported individually to the CDFW and CPM. b. ***Other expenses.*** In addition to the costs listed above, the project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to title and document review costs, expenses incurred from other state agency reviews, and overhead related to providing compensation lands to CDFW or an approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures. c. ***Mitigation Security.*** The project owner shall provide financial assurances in accordance with **BIO-28** (phasing) to the CPM and CDFW with copies of the document(s) to BLM and the USFWS, to guarantee that an adequate level of funding is available to implement the mitigation measures described in this Condition. These funds shall be used solely for implementation of the measures associated with the project in the event the project owner fails to comply with the requirements specified in this Condition, or shall be returned to the project owner upon successful compliance with the requirements in this Condition. The CPM's or CDFW's use of the security to implement measures in this Condition may not fully satisfy the project owner's obligations under this condition. Financial assurance can be provided to the CPM and CDFW in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security"). Prior to submitting the Security to the CPM, the project owner shall obtain the CPM's approval, in consultation with CDFW, BLM and the USFWS, of the form of the Security. Security shall be provided in the amounts of $3,681,687 for Phase 1; $3,234,921 for Phase 2, $3,613,250 for Phase 3, and $3,115,754 for Phase 4. These Security estimates are based on the most current guidance from the REAT agencies (Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010) and may be revised with updated information. This Security estimate reflects the amount that would be required for Security if the project owner acquired the 3,975 acres of mitigation lands itself. The actual costs to comply with this condition will vary depending on the final footprint of the project and its four phases, and the actual costs of acquiring, improving and managing the compensation lands. d. ***NFWF REAT Account.*** The project owner may elect to fund the acquisition and initial improvement of compensation lands through NFWF by depositing funds for that purpose into NFWF's REAT Account. Initial deposits for this purpose, which includes a NFWF administrative fee, must be made in the amounts of $3,802,991 for Phase 1, $3,304,650 for Phase 2, $3,691,169 for Phase 3, and $3,182,894 for Phase 4 as the security required in section 3h., above and may be provided in lieu of security**.** If this option is used for the acquisition and initial improvement, the project owner shall make an additional deposit into the REAT Account if necessary to cover the actual acquisition costs and administrative costs and fees of the compensation land purchase once land is identified and the actual costs are known. If the actual costs for acquisition and administrative costs and fees are less than that estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010,* or more current guidance from the REAT agencies, the excess money deposited in the REAT Account shall be returned to the project owner. Money deposited for the initial protection and improvement of the compensation lands shall not be returned to the project owner. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a nongovernmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission and CDFW. Such delegation shall be subject to approval by the CPM and CDFW, in consultation with BLM and USFWS, prior to land acquisition, initial protection or maintenance and management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be implemented with 18 months of the Energy Commission's approval.				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
DF BIO-13: Raven Management Plan. The project owner shall implement a Raven Monitoring, Management**,** and Control Plan (Raven Plan) that is consistent with the most current USFWS-approved raven management guidelines, and which meets the approval of the CMP, in consultation with BLM, USFWS and CDFW. The draft Raven Plan submitted by the project owner (AECOM 2010a, Attachment DR-BIO-49) shall provide the basis for the revised draft and final Raven Plan, subject to review, revisions and approval from BLM, the CPM, CDFW and USFWS. The Raven Plan shall include but not be limited to a program to monitor raven presence in the project vicinity, determine if raven numbers are increasing, and to implement raven control measures as needed based on that monitoring. The purpose of the plan is to avoid any project-related increases in raven numbers during construction, operation, and decommissioning. In addition**,** the project owner shall also provide funding for implementation of the USFWS Regional Raven Management Program, as described below. The Raven Plan shall: a. Identify conditions associated with the project that might provide raven subsidies or attractants; b. Describe management practices to avoid or minimize conditions that might increase raven numbers and predatory activities; c. Describe control practices for ravens; d. Establish thresholds that would trigger implementation of control practices; e. Address monitoring and nest removal during construction and for the life of the project, and; f. Discuss reporting requirements. ***USFWS Regional Raven Management Program.*** The project owner shall submit a per phase payment to the project sub-account of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the USFWS Regional Raven Management Program. The one time fee shall be as described in the cost allocation methodology (*Renewable Energy Development And Common Raven Predation on the Desert Tortoise – Summary*, dated May 2010; *Cost Allocation Methodology for Implementation of the Regional Raven Management Plan*, dated July 9, 2010) or more current guidance as provided by USFWS or CDFW.	At least 45 days prior to any project-related ground disturbance activities, the project owner shall submit the revised draft Raven Plan to the CPM for review and approval and CDFW and USFWS for review and comment. No less than 10 days prior to the start of any project-related ground disturbance activities, including pre-construction site mobilization, the project owner shall provide the CPM, USFWS, and CDFW with the final version of a Raven Plan. The CPM would determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Raven Plan shall be made only with approval of CPM in consultation with USFWS and CDFW. No less than 10 days prior to the start of any project-related ground disturbance, including pre-construction site mobilization activities for each phase of project construction as described in **BIO-28**, the project owner shall provide documentation to the CPM, BLM, CDFW and USFWS that the one-time fee for the USFWS Regional Raven Management Program of has been deposited to the REAT-NFWS subaccount for the project. Current estimate of the fee for the USFWS Regional Raven Management Program is $105/acre. Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Raven Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding. As part of the annual compliance report, each year following construction the Designated Biologist shall provide a report to the CPM that includes: a summary of the results of raven management and control activities for the year; a discussion of whether raven control and management goals for the year were met; and recommendations for raven management activities for the upcoming year.			
DF BIO-14: Weed Management Plan. The project owner shall implement a Weed Management Plan (Plan) that meets the approval of the CPM. The objective of the Plan shall be to prevent the introduction of any new weeds and the spread of existing weeds as a result of project site mobilization, construction, operation, and closure. The draft Weed Management Plan submitted by the previous owner (AECOM 2010a, Attachment DR-BIO-97) shall provide the basis for the final plan, subject to review and revisions from the CPM and the BLM. 1. ***Weed Plan Requirements.*** The project owner shall provide a map to the CPM indicating the location of the Weed Management Area, which shall include all areas within 100 feet of the Project Disturbance Area, access roads, staging and laydown sites, and all other areas subject to temporary disturbance. The project owner shall provide a Plan for the Weed Management Area includes at a minimum the following information: specific weed management objectives and measures for each target non-native weed species; baseline conditions; a map of the Weed Management Areas; map of existing populations of target weeds within 100 feet of the Project Disturbance Area and access roads; weed risk assessment; measures to prevent the introduction and spread of weeds; measures to minimize the risk of unintended harm to wildlife and other plants from weed control activities; monitoring and surveying methods; and reporting requirements. Weed control described in the Plan shall focus on prevention, early detection of new infestations, and early eradication for the life of the Project. Weed control along the Project linears shall be limited to the areas where soils were disturbed during construction. Weed monitoring shall occur a minimum of once per year during the early spring months (February-April) to detect seedlings before they set seed. The focus of the Plan shall be on avoiding the introduction of new invasive weeds or the spread of highly invasive species, such as Sahara mustard. Non-native species with low ecological risk, or that are very widespread, such as Mediterranean grass, shall be noted but control shall not be required. When detected, new infestations of high priority species shall be eradicated immediately, if possible. a. ***Avoidance and Treatment of Dense Weed Populations.*** The Plan shall include a requirement to flag and avoid dense populations of the most invasive non-native weeds during any Project-related construction and operation in or adjacent to infestations. If these areas cannot be avoided, they shall be pre-treated, if practical, by one of the following methods: a) treating the infested areas by removing and properly disposing of seed heads by hand, prior to maturity, or spraying the new crop of plants that emerge in early spring to reduce the viable seed contained in the soil, or b) removing and disposing the upper 2 inches of soil and disposing it offsite at a sanitary landfill or other site approved by the County Agricultural Commissioner, or burying the infested soil, e.g. under the solar facility or in a pit, and covering the infested soil with at least three feet of uncontaminated soil. Where these measures are infeasible, then post-construction monitoring and control, as identified in Section 5, below, will be implemented. b. ***Cleaning Vehicles and Equipment.*** The Plan shall include specifications and requirements for the cleaning and removal of weed seed and weed plant parts from vehicles and equipment involved in Project-related construction and operation. Vehicles and equipment working in weed-infested areas (including previous job sites) shall be required to clean the equipment tires, tracks, and undercarriage *before* entering the Project area and, if necessary, before moving from infested areas of the Project Disturbance Area to uninfested areas.	No less than 10 days prior to start of any project-related ground disturbance activities including site mobilization and construction, the project owner shall provide the CPM with the final version of a Weed Management Plan that has been reviewed by BLM, and Energy Commission staff, USFWS, and CDFW and approved by CPM. Modifications to the approved Weed Control Plan shall be made only with approval from the CPM in consultation with BLM, USFWS, and CDFW. Within 30 days after completion of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Weed Management Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding. As part of the annual compliance report, each year following construction the Designated Biologist shall provide a report to the CPM that includes: a summary of the results of noxious weeds surveys and management activities for the year; a discussion of whether weed management goals for the year were met; and recommendations for weed management activities for the upcoming year.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
Cleaning shall be conducted on all track and bucket/blade components to adequately remove dirt and plant debris. Cleaning using hand tools, such as brushes, brooms, rakes, or shovels, is preferred. If water must be used, the water/slurry shall be contained to prevent seeds and plant parts from washing into adjacent habitat. c. ***Safe Use of Herbicides.*** The final Plan shall include detailed specifications for avoiding herbicide and soil stabilizer drift, and shall include a list of herbicides and soil stabilizers that will be used on the Project with manufacturer's guidance on appropriate use. The Plan shall indicate where the herbicides are expected to be used, and what techniques will be used to avoid chemical drift or residual toxicity to special-status species and their pollinators, and consistent with the Nature Conservancy guidelines and the criteria under #2, below. Initially, weed control measures for target weeds with a demonstrated record of success shall be used, based on the best available information from sources such as The Nature Conservancy's The Global Invasive Species Team, California Invasive Plant Council: http://www.cal-ipc.org/ip/management/plant_profiles/index.php, and the California Department of Food & Agriculture Encycloweedia: http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/encycloweedia_hphtm. d. Other methods that may be effective, or have proven to be effective, but are not yet published, may be used upon approval by the CPM and BLM. e. The methods for weed control described in the final Plan shall meet the following criteria: i. Manual: Well-timed removal of plants or seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the Riverside County Agricultural Commissioner. ii. Chemical: Herbicides known to have residual toxicity, such as pre-emergents and pellets, shall not be used in natural areas or within the engineered channels. Only the following application methods may be used: wick (wiping onto leaves); inner bark injection; cut stump; frill or hack and squirt (into cuts in the trunk); basal bark girdling; foliar spot spraying with backpack sprayers or pump sprayers at low pressure or with a shield attachment to control drift, and only on windless days, or with a squeeze bottle for small infestations (see Nature Conservancy guidelines described above); iii. Biological: Biological methods may be used subject to review and approval by CDFW and USFWS and only if approved for such use by CDFA, and are either locally native species or have no demonstrated threat of naturalizing or hybridizing with native species; iv. Mechanical: Disking, tilling, and mechanical mowers or other heavy equipment shall not be employed in natural areas but hand weed trimmers (electric or gas-powered) may be used. Mechanical trimmers shall not be used during periods of high fire risk and shall only be used with implementation of fire prevention measures.				
DF BIO-15: Avian and Bat Protection Plans. 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. The BBCS shall provide for the following: • Surveying and monitoring onsite avian use prior to commencing construction to document species composition. The project owner will submit all data gathered onsite to the CPM as specified herein, or as requested by the CPM, and will also make consulting biologists available to answer CPM inquiries. • Implementation of 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 and perimeter fences. • Implementation of an adaptive management and decision-making framework for reviewing, characterizing, and responding to mortality monitoring results. • Identification of specific conservation measures and/or programs to avoid, minimize, reduce or eliminate CEQA significant impacts over time and evaluation of the effectiveness of those measures. ***BBCS Components*** The BBCS shall 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). 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. 3. Full survey methodology and field documentation, identification of appropriate onsite survey locations, seasonal considerations, and preconstruction data.	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. 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. **Reporting Protocol:** Verification of Survey Results (including preconstruction bird and bat use, 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. Post-construction monitoring studies included in the BBCS shall be for at least two years following commencement of commercial operation of each individual unit. The BBCS shall define the circumstances under which additional years of monitoring would be necessary. The Monitoring Study shall continue until the CPM, in consultation with CDFW, BLM, and USFWS, using the criteria included in the BBCS, 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 second year of the monitoring program, the CPM shall meet and confer with the TAC (if convened) and shall use the criteria contained in the BBCS to determine if subsequent monitoring periods are 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.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
4. Avian and bat mortality and injury monitoring, 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 to document potential weather-related collision risks that may be associated with 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 in which 40 miles per hour winds are sustained for a period of greater than 4 hours; (c) Statistically robust scavenger and searcher efficiency trials postconstruction 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 post-construction avian and bat impacts based on the observed number of detections during standardized searches during the monitoring season; (e) Field detection and mortality or injury identification, cause attribution, handling and reporting protocols consistent with applicable legal requirements. 5. Survey schedule and period. Post-construction monitoring studies included in the BBCS shall be for at least two years following commencement of commercial operation of each individual unit. At the end of the second year, the CPM, in consultation with the TAC, shall determine whether the survey program shall be continued for up to two additional years, 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 reduce levels of avian or bat mortality or injury attributable to project operations and facilities to less than CEQA significant levels. Any such impact reduction measures must be commensurate (in terms of factors that include geographic scope, costs, and scale of effort) with the level of avian or bat mortality or injury. 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 could implement to adaptively respond to detected mortality and injuries attributable to the project, including but not limited to 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 of project facilities. 7. Adaptive Mitigation: The CPM may require the project owner to implement adaptive mitigation for CEQA significant onsite injury or mortality of birds and bats, based on recommendations of the TAC. Any such adaptive mitigation measures must be commensurate (in terms of factors that include geographic scope, costs, and scale of effort) with the level of avian or bat mortality or injury that is attributable to the project facilities. Adaptive mitigation measures undertaken will be discussed and evaluated in survey reports. Such measures shall be approved by the CPM in consultation with the TAC 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.				
DF BIO-16: Pre-Construction Nest Surveys and Avoidance Measures. Pre-construction nest surveys shall be conducted if site mobilization and construction, mowing, trimming, or any vegetation maintenance activities would occur from February 1 through July 31. The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). The goal of the nesting surveys shall be to identify the general location of the nest sites, sufficient to establish a protective buffer zone around the potential nest site, and need not include identification of the precise nest locations. Surveyors performing nest surveys shall not concurrently be conducting desert tortoise surveys. The bird surveyors shall perform surveys in accordance with the following guidelines:	At least 10 days after surveys are completed, the project owner shall provide the CPM a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor (s); and a list of species observed. If active or suspected active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest or suspected nest location and shall depict the boundaries of the no-disturbance buffer zone around the nest(s) that would be avoided during project construction.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
1. Surveys shall cover all potential nesting habitat areas that could be disturbed by each phase of construction, as described in **BIO-28** (Phasing). Surveys shall also include areas within 500 feet of the boundaries of the active construction areas (including linear facilities); 2. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys shall be conducted within a 14-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks, an interval during which birds may establish a nesting territory and initiate egg laying and incubation; 3. During operations and maintenance prior to mowing and any other vegetation maintenance during the nesting season, (February 1 through July 31) a single survey shall be conducted within 7 days of construction or maintenance activity to determine whether birds are nesting in the vegetation on site; 4. If active nests or suspected active nests are detected during the survey (including mowing and vegetation maintenance surveys during operations), a buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFW) and monitoring plan shall be developed, in coordination with the CPM. Nest locations shall be mapped and submitted, along with a report stating the survey results, to the CPM; and 5. The Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed; activities that might, in the opinion of the Designated Biologist, disturb nesting activities, shall be prohibited within the buffer zone until such a determination is made.	Each year during construction as part of the annual compliance report a follow-up report shall be provided to the CPM, BLM, CDFW, and USFWS describing the success of the buffer zones in preventing disturbance to nesting activity and a brief description of the outcome of the nesting effort (for example, whether young were successfully fledged from the nest or if the nest failed).			
DF BIO-17: American Badger and Desert Kit Fox Impact Avoidance and Minimization Measures. The project owner shall contract a qualified biologist to conduct a baseline pre-construction desert kit fox and American badger survey and develop and implement an American Badger and Desert Kit Fox Mitigation and Monitoring Plan (Plan). The survey data will be used to revise the final Plan, as necessary, with the most recent species data from the project site. The project owner shall conduct a baseline kit fox survey and submit a summary report that includes the following procedures: 1. A qualified biologist with demonstrated mammal experience shall complete a baseline pre-construction survey of desert kit fox and American badger populations on the project site and the anticipated dispersal areas for passive relocation between 30 and 60 days prior to initiation of any ground disturbing activities, not including installation of perimeter/desert tortoise fencing. Surveys of the solar plant site may be conducted after the perimeter fence is installed and concurrently with desert tortoise clearance surveys. The anticipated dispersal areas shall be defined as all suitable desert kit fox habitat within 500 meters of the project boundaries where desert kit fox would likely be displaced. The survey shall identify and record the locations of all potential dens throughout the project site (or phase) and shall characterize the approximate number and distribution of the badger and kit foxes on the site and anticipated dispersal areas. Depending on the season of the surveys (i.e. breeding or non-breeding) other demographic data will be. Approximately 30 to 60 days prior to installation of perimeter/desert tortoise fencing, a pre-construction survey for kit foxes will be conducted along the fenceline route. Depending on the fox breeding season, the width of the surveyed route and buffers may vary, as described in the approved Plan. The baseline pre-construction survey shall include the following components: a. An inventory and mapped locations of desert kit fox dens and burrows on the project site (including all project disturbance areas) and in the anticipated dispersal areas, and an evaluation whether each burrow is occupied, and reproductive status of kit foxes (single animal, mated pair, or family group with young), if known. If status unknown measures as required under Item 2b, below, will be implemented. b. Reporting: The project owner shall provide a draft Summary Report of the Baseline American Badger and Desert Kit Fox Survey to the CPM and BLM for review in consultation with CDFW. The project owner and the project owner's Designated Biologist shall consult with the CPM and BLM on any changes to the final Plan that would result from the baseline pre-construction survey data provided in the Summary Report. The project owner shall not implement the American Badger and Desert Kit Fox Mitigation and Monitoring Plan (below) until receiving the CPM and BLM's written approval of the final Plan. The objective of the plan shall be to avoid direct impacts to the American badger and desert kit fox as a result of site mobilization and construction of the power plant and linear facilities, as well as during project operation and non-operation and closure. The final plan is subject to review and comment by BLM and revision and approval by the CPM, in consultation with CDFW. The final Plan shall include, but is not limited to, the following procedures and impact avoidance measures: 2. Describe pre-construction survey and clearance field protocol, to determine the number and locations of single or paired kit foxes or badgers on the project site that would need to be avoided or passively relocated and the number and locations of desert kit fox or badger burrows or burrow complexes that would need to be collapsed to prevent re-occupancy by the animals. a. *Pre-Construction Surveys. A baseline, preconstruction survey shall be conducted as described above under Item 1.* Surveys may be concurrent with desert tortoise and burrowing owl surveys to the extent it does not conflict with desert tortoise and burrowing owl agency protocols. Depending on the timing of the project phases and time	No fewer than 90 days prior to the start of any site mobilization and construction the project owner shall provide the CPM, BLM, and CDFW with a draft American Badger and Desert Kit Fox Mitigation and Monitoring Plan for review and comment. Approximately 30 to 60 days prior to initiation of site mobilization and construction activities, not including perimeter/desert tortoise fencing, a qualified biologist with demonstrated mammal experience shall complete a baseline study of American badger and desert kit fox populations on the project site and the anticipated dispersal areas for passive relocation. Approximately 30 to 60 days prior to installation of perimeter/desert tortoise fencing, a pre-construction survey for kit foxes shall be conducted along the fenceline route. The project owner shall submit a summary report to the CPM, BLM and CDFW within 7 days of completion of any badger and kit fox surveys. The report shall describe survey methods and results of the surveys. The project owner and the Designated Biologist shall consult with the CPM and BLM upon submitting the summary report regarding any changes to the final Plan. No fewer than 15 days prior to start of any site mobilization and construction, the project owner shall provide an electronic copy of the CPM-approved final Plan to the CPM, BLM and CDFW and implement the Plan. No later than 24 hours following a phone notification of an injured, sick, or dead American badger or desert kit fox, the project owner shall provide to the CPM, BLM and CDFW, via FAX or electronic communication, a written report from the Designated Biologist describing the incident of sickness, injury, or death of an American badger or desert kit fox, when the incident occurred, and who else was notified. Beginning with the first month after start of construction and continuing every month until construction is completed, the Designated Biologist shall include a summary of events regarding the American badger and desert kit fox in each Monthly Compliance Reports (MCR). The impact avoidance and minimization measure(s) implemented and the results of implementation of those measures shall be reported in each MCR. No later than 45 days after initiation of project operation, the Designated Biologist shall provide the CPM and BLM a final American Badger and Desert Kit Fox Mitigation and Monitoring Plan Report that includes: 1) a discussion of all mitigation measures that were and currently are being implemented; 2) all information about project-related kit fox and badger injuries and/or deaths; 3) all information regarding sick kit fox and badger found within the project site and along related linear facilities; and 4) recommendations on how mitigation measures might be changed to more effectively minimize and mitigate the impacts of future projects on the American badger and desert kit fox. Within 30 days of participation in the CDFW led fee based Monitoring and Mitigation Program during site mobilization and construction or operation the project owner will submit a revised Plan that includes the program information related to the project and confirmation that all fees are paid.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
between phases, surveys may need to be conducted for each phase of construction Options for timing of surveys shall be detailed in the Plan. If dens are detected during the survey(s), each den shall be classified as inactive, potentially active, definitely active den, or natal den. b. *Monitoring and Protection Measures, Passive Hazing, and Den Excavation:* The plan will include details on monitoring requirements, types and methods of passive hazing, and methods and timing of den excavation, including, but not limited to the following: i. Inactive dens. Inactive dens [e.g. inactive dens are dens that are mostly or entirely silted in and ones in which the back of the den can be clearly seen (e.g., the den isn't deep and doesn't curve)] that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badger or kit fox. Only outside the whelping/pup rearing season as defined in the kit fox plan, dens that are determined to be inactive based on vegetation, debris or soil conditions, indicating to an experienced field biologist that the den is not being used, can be excavated by hand in the early evening. ii. Potentially and definitely active dens. Potentially and definitely active dens that would be directly impacted by construction activities shall be monitored by the Biological Monitor for three consecutive nights using a tracking medium (such as diatomaceous earth or fire clay) and/or infrared camera stations at the entrance. If no tracks are observed in the tracking medium or no photos of the target species are captured after three nights, the den shall be excavated and backfilled by hand. If tracks are observed, the den shall be progressively blocked with natural materials (rocks, dirt, sticks, and vegetation piled in front of the entrance) for the next three to five nights to discourage the badger or kit fox from continued use. After verification that the den is unoccupied it shall then be excavated and backfilled by hand to ensure that no badgers or kit fox are trapped in the den. If the den is proven inactive then den may be collapsed during whelping season. BLM approval may be required prior to release of badgers on public lands. iii. Active natal/pupping dens. If an active natal den (a den with pups) is detected on the site, the project owner shall proceed to implement the approved Plan and shall also notify the BLM, CPM, and CDFW within 24 hours. If the situation is unusual and/or not addressed by the approved Plan, then the project owner's biologist shall consult with the CPM, BLM, and CDFW to determine the appropriate course of action to minimize the potential for animal harm or mortality. The course of action would depend on the age of the pups, location of the den on the site (e.g. is the den in a central area or in a perimeter location), status of the perimeter site fence (completed or not), and the pending construction activities proposed near the den. A 500-foot no-disturbance buffer shall be maintained around all active dens. The denning season for American badger is approximately March to August, and for desert kit fox the denning season is approximately Mid-January to pup independence typically by July 1 (or earlier with confirmation of pup independence based on monitoring data). If the den is active during the whelping season, even if pups are not seen, disturbance is not allowed. Active natal/pupping dens will not be excavated or passively relocated. c. *Exception for American badger.* In the event that passive relocation techniques fail for badgers, outside the denning season, or during the denning season if individual badgers can be verified to not have a litter, then live-trapping by a CDFW and CPM approved trapper is an option that may be employed to safely perform active removal as a last resort. A live-trapping plan including trapping methods as well as the name and resume, including documentation of relevant handling permits of the proposed trapper, would be included in detail as part of the approved Plan. In the event live-trapping would be employed as a last resort, written notification would be submitted to the CPM for review and approval in consultation with BLM and CDFW. The CPM, BLM and CDFW would be notified in writing no less than 1 week prior to live trapping of badger. The notification would at a minimum include what passive relocation methods have been attempted to date and the justification for live-trapping as a last resort. In addition timing, and location of release of the individual badger as well as the name of the proposed trapper and resume, including documentation of relevant handling permits if not previously included and approved in the Plan shall be included in the notification. BLM approval may be required prior to release of badgers on public lands. 3. Address other factors and procedures that may affect the success of kit fox and American badger relocation offsite, such as: a. Qualitative discussion of availability of suitable habitat on off-site surrounding lands within 10 miles of the project boundary, and evaluation of kit fox burrows with 500 meters of the project boundary, in areas where onsite foxes may disperse (e.g., by inventorying burrow numbers in selected representative sample areas) as identified in the pre-construction surveys above; b. Estimates of the distances kit foxes would need to travel across the project site and across adjacent lands to safely access suitable habitat (including burrows) off-site; c. Proposed scheduling of the passive relocation effort; d. Methods to minimize likelihood that the animals will return to the project site; e. Descriptions of any proposed or potential ground disturbing activities related to kit fox relocation, and locations of those activities (e.g., artificial burrow construction); f. A monitoring and reporting plan to evaluate success of the relocation efforts and any subsequent re-occupation of the project site; and				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
g. A plan to subsequently relocate any animals that may return to the site (e.g., by digging beneath fences). 4. Address notification procedures for notifying the CPM, BLM and CDFW if injured, sick, or dead badger or kit fox are detected. Notify the CPM, BLM and CDFW if injured, sick, or dead American badger and desert kit fox are found. If an injured, sick, or dead animal is detected on any area associated with the solar project site or associated linear facilities, the CPM, BLM Palm Springs/ South Coast Field Office and the Ontario CDFW Office as well as the CDFW Wildlife Investigation Lab (WIL) shall be notified immediately by phone (8 hours in the case of a fatality). Written follow-up notification via FAX or electronic communication shall be submitted to the CPM, BLM and CDFW within 24 hours of the incident and shall include the following information as appropriate: a. *Injured animals.* If an American badger or desert kit fox is injured because of any project-related activities, the Designated Biologist or approved Biological Monitor shall immediately notify the CPM, BLM and CDFW personnel regarding the capture and transport of the animal to CDFW-approved wildlife rehabilitation and/or veterinarian clinic. Following the phone notification, the CPM and CDFW shall determine the final disposition of the injured animal, if it recovers. A written notification of the incident shall be sent to the CPM, BLM and CDFW containing, at a minimum, the date, time, location, and circumstances of the incident. b. *Sick animals.* If an American badger or desert kit fox is found sick and incapacitated on any area associated with the project site or associated linear facilities, the Designated Biologist or approved Biological Monitor shall immediately notify the CPM, BLM and CDFW personnel for immediate capture and transport of the animal to a CDFW-approved wildlife rehabilitation and/or veterinarian clinic. Following the phone notification, the CPM and CDFW shall determine the final disposition of the sick animal, if it recovers. If the animal dies, a necropsy shall be performed by a CDFW-approved facility to determine the cause of death, in accordance with measure "c", below. c. *Fatalities.* If an American badger or desert kit fox is killed because of any project-related activities during construction, operation, and decommissioning or is found dead on the project site or along associated linear facilities, the Designated Biologist or approved Biological Monitor shall immediately refrigerate the carcass and notify the CPM, BLM and CDFW personnel within 24 hours (8 hours in the case of desert kit fox) of the discovery to receive further instructions on the handling of the animal. Handling of a dead kit fox shall follow the Guidelines for Handling a Desert Kit Fox Carcass (CDFW WIL) or most recent guidance. A necropsy shall be performed by a CDFW-approved facility to determine the cause of death. The project owner shall pay to have the animal transported and a necropsy performed. 5. Additional protection measures to be included in the Plan and implemented: a. All pipes within the project disturbance area outside the solar plant site, or inside the solar plant site if foxes are still on the site, must be fenced, capped and/or covered every evening or when not in use to prevent desert kit foxes or other animals from accessing the pipes and/or monitored. b. All project-related water sources shall be covered and secured when not in use to prevent drowning. c. The project owner shall coordinate with CDFW to identify any additional fence design features to maximize the effectiveness of the fence to exclude kit foxes from the project. d. Incorporate and implement the CDFW Veterinarian's guidance regarding impact avoidance measures including measures to prevent disease spread among desert kit foxes. e. Include measures to reduce traffic impacts to wildlife if the project owner anticipates night-time construction. The plan must also include a discussion of what information will be provided to all night-time workers, including truck drivers, to educate them about the threats to kit fox, what they need to do to avoid impacts to kit fox, and what to report if they see a live, injured, or dead kit fox. f. In order to reduce the likelihood of distemper transmission: i. No pets shall be allowed on the site prior to or during site mobilization and construction, operation, and non-operation and closure, with the possible exception of vaccinated kit fox scat detection dogs during preconstruction surveys, and then only with prior CPM and CDFW approval; ii. Any hazing activities that include the use of chemical or other repellents (e.g. ultrasonic noise makers, or non-animal-based chemical repellents) must be cleared through the CPM and CDFW prior to use. The use of animal tissue or excretion based repellents (e.g. coyote urine, anal gland products) is not permitted. iii. Any sick or diseased kit fox, or documented kit fox mortality shall be reported to the CPM, CDFW, and the BLM immediately upon identification (within 8 hours for mortality). If a dead kit fox is observed, it shall be collected and stored according to established protocols distributed by CDFW WIL, and the WIL shall be contacted to determine carcass suitability for necropsy. 6. The project owner may opt to participate in the CDFW led fee based Monitoring and Mitigation Program if in place prior to start of site mobilization and construction in lieu of implementation of certain items in 3i, 3j, 5a, 5b, 5d, 5f above. This includes financial responsibility for transportation and necropsy of desert kit fox mortalities due to project-related activities or sick animals found on or near the project site or associated linears as well as measures to address other factors and procedures that may affect the success of kit fox and American badger relocation offsite. If in place, the CDFW Monitoring and Mitigation Program activities associated with the Project and				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
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Biological Resources (cont.)				
associated fees will be fully described in the final Plan. The project owner may also opt to participate in the program if established at a later date during site mobilization and construction or operation and will submit a revised Plan that includes the program information when established and confirmation that fees are paid.				
DF BIO-18: Burrowing Owl Impact Avoidance, Minimization, and Compensation Measures. The project owner shall implement the following measures to avoid, minimize and offset impacts to burrowing owls: 1. ***Pre-Construction Surveys.*** The Designated Biologist or Biological Monitor shall conduct pre-construction surveys for burrowing owls no more than 30 days prior to initiation of site mobilization and construction activities in accordance with CDFW guidelines (CDFW 2012). Surveys shall be focused exclusively on detecting burrowing owls, and shall be conducted from two hours before sunset to 1 hour after or from 1 hour before to 2 hours after sunrise. The survey area shall include the Project Disturbance Area and surrounding 500 foot survey buffer for each phase of construction in accordance with **BIO-28** (phasing). 2. ***Implement Burrowing Owl Mitigation Plan.*** The project owner shall implement measures described in the final Burrowing Owl Mitigation Plan. The final Burrowing Owl Mitigation Plan shall be approved by the CPM, in consultation with BLM, USFWS and CDFW, and shall: a. identify suitable sites within 1 mile of the Project Disturbance Areas for creation or enhancement of burrows prior to passive relocation efforts; b. provide guidelines for creation or enhancement of at least two natural or artificial burrows per relocated owl; design of the artificial burrows shall be consistent with CDFW guidelines (CDFW 2012); c. provide detailed methods and guidance for passive relocation of burrowing owls occurring within the Project Disturbance Area; and d. describe monitoring and management of the passive relocation effort, including the created or enhanced burrow location and the project area where WBO were relocated from and provide a reporting plan. 3. ***Implement Avoidance Measures.*** If an active burrowing owl burrow is detected within 500 feet from the Project Disturbance Area the following avoidance and minimization measures shall be implemented: a. *Establish Non-Disturbance Buffer.* Fencing shall be installed at a 250-foot radius from the occupied burrow to create a non-disturbance buffer around the burrow. The non-disturbance buffer and fence line may be reduced to 160 feet if all project-related activities that might disturb burrowing owls would be conducted during the non-breeding season (September 1st through January 31st). Signs shall be posted in English and Spanish at the fence line indicating no entry or disturbance is permitted within the fenced buffer. b. *Monitoring:* If construction activities would occur within 500 feet of the occupied burrow during the nesting season (February 1 – August 31st) the Designated Biologist or Biological Monitor shall monitor to determine if these activities have potential to adversely affect nesting efforts, and shall make recommendations to minimize or avoid such disturbance. 4. ***Acquire 39 Acres of Burrowing Owl Habitat.*** The project owner shall acquire, in fee or in easement 39 acres of land suitable to support a resident population of burrowing owls and shall provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for acquisition and management of the compensation lands may be delegated by written agreement to CDFW or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with BLM, CDFW and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. a. *Criteria for Burrowing Owl Mitigation Lands.* The terms and Conditions of this acquisition or easement shall be as described in **BIO-12** [Desert Tortoise Compensatory Mitigation], with the additional criteria to include: 1) the 39 acres of mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must either currently support burrowing owls or be within dispersal distance from areas occupied by burrowing owl (generally approximately five miles). The 39 acres of burrowing owl mitigation lands may be included with the desert tortoise mitigation lands ONLY if these two burrowing owl criteria are met. If the 39 acres of burrowing owl mitigation land is separate from the acreage required for desert tortoise compensation lands, the project owner shall fulfill the requirements described below in this Condition. b. *Security.* If the 39 acres of burrowing owl mitigation land is separate from the acreage required for desert tortoise compensation lands, the project owner or an approved third party shall complete acquisition of the proposed compensation lands within the time period specified for this acquisition (see the verification section at the end of this Condition). Alternatively, financial assurance can be provided by the project owner to the CPM and CDFW, according to the measures outlined in **BIO-12**. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating ground-disturbing project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with BLM, CDFW and the USFWS, to ensure funding. The final amount due will be determined by an updated appraisal and PAR analysis conducted as described in **BIO-12**.	If pre-construction surveys detect burrowing owls within the Project Disturbance Area and relocation of the owls is required, within 30 days of completion of the burrowing owl pre-construction surveys the project owner shall submit to the CPM, BLM, CDFW, and USFWS a Burrowing Owl Mitigation Plan. The Burrowing Owl Mitigation Plan shall identify suitable areas for construction of burrows and the other passive relocation as described above. As part of the Annual Compliance Report each year following construction for a period of five years, the Designated Biologist shall provide a report to the CPM, BLM, USFWS and CDFW that describes the results of monitoring and management of the burrowing owl burrow creation or enhancement area(s). If pre-construction surveys detect burrowing owls within 500 feet of proposed construction activities, at least 10 days prior to the start of any project-related site disturbance activities the Designated Biologist shall provide to the CPM, BLM, CDFW, and USFWS documentation indicating that non-disturbance buffer fencing has been installed as described above. The project owner shall report monthly to BLM, the CPM, CDFW and USFWS for the duration of construction on the implementation of burrowing owl avoidance and minimization measures. The project owner shall report monthly to BLM, the CPM, CDFW and USFWS for the duration of construction on the implementation of burrowing owl avoidance and minimization measures. Within 30 days after completion of construction the project owner shall provide to the CDFW and CPM a written report identifying how mitigation measures described in the plan have been completed. No less than 30 days prior to the start of site mobilization and construction activities the project owner shall provide the CPM with an approved form of Security in accordance with this condition of certification. Actual Security for acquisition of 39 acres of burrowing owl habitat shall be provided no later than 7 days prior to the beginning of site mobilization and construction activities. No fewer than 90 days prior to the land or easement purchase, as determined by the date on the title, the project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFW, BLM, and USFWS, for the compensation lands and associated funds. No later than 18 months from initiation of construction, the project owner shall provide written verification to the CPM that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
DF BIO-19: Special-Status Plant Impact Avoidance, Minimization and Compensation. This Condition contains the following four sections: • ***Section A: Special-Status Plant Impact Avoidance and Minimization Measures*** contains the Best Management Practices and other measures designed to avoid accidental impacts to plants occurring outside of the Project Disturbance Area and within 100 feet of the Project Disturbance Area during construction, operation, and closure. • ***Section B: Conduct Late Season Botanical Surveys*** describes guidelines for conducting summer-fall 2010 surveys to detect special-status plants that would have been missed during the spring 2010 surveys. • ***Section C: Avoidance Requirements for Special-Status Plants*** Detected in the Summer/Fall 2010 Surveys outlines the level of avoidance required for plants detected during the summer-fall surveys, based on the species' rarity and status codes. • ***Section D: Off-Site Compensatory Mitigation for Special-Status Plants*** describes performance standards for mitigation for a range of options for compensatory mitigation through acquisition, restoration/enhancement, or a combination of acquisition and restoration/enhancement. "Project Disturbance Area" encompasses all areas to be temporarily and permanently disturbed by the project, including the plant site, linear facilities, and areas disturbed by temporary access roads, fence installation, construction work lay-down and staging areas, parking, storage, or by any other activities resulting in disturbance to soil or vegetation. The project owner shall implement the following measures in Section A, B, C, and D to avoid, minimize, and compensate for impacts to special-status plant species: 1. **Section A: Special-Status Plant Impact Avoidance and Minimization Measures** To protect all special-status plants[4] located outside of the Project Disturbance Area and within 100 feet of the permitted Project Disturbance Area from accidental and indirect impacts during construction, operation, and closure, the project owner shall implement the following measures: 1. *Designated Botanist*. An experienced botanist who meets the qualifications described in Section B-2 below shall oversee compliance with all special-status plant avoidance, minimization, and compensation measures described in this Condition throughout construction and closure. The Designated Botanist shall oversee and train all other Biological Monitors tasked with conducting botanical survey and monitoring work. During operation of the project, the Designated Biologist shall be responsible for protecting special-status plant occurrences within 100 feet of the project boundaries. 2. *Special-Status Plant Impact Avoidance and Minimization Measures*. The project owner shall incorporate all measures for protecting special-status plants in close proximity to the site into the BRMIMP (**BIO-7**). These measures shall include the following elements: a. Site Design Modifications: Incorporate site design modifications to minimize impacts to special-status plants along the project linears: limiting the width of the work area; adjusting the location of staging areas, lay downs, spur roads and poles or towers; driving and crushing vegetation as an alternative to blading temporary roads to preserve the seed bank, and minor adjustments to the alignment of the roads and pipelines within the constraints of the ROW. Design the engineered channel discharge points to maintain the natural surface drainage patterns between the engineered channel and the outlet of the natural washes that flow toward the south and east, downstream of the project These modifications shall be clearly depicted on the grading and construction plans, and on report-sized maps in the BRMIMP. b. Establish Environmentally Sensitive Areas (ESAs). Prior to the start of any ground- or vegetation-disturbing activities, the Designated Botanist shall establish ESAs to protect avoided special-status plants that occur outside of the Project Disturbance Areas and within 100 feet of Project Disturbance Areas. This includes plant occurrences identified during the spring 2009-2010 surveys and the late season 2010 surveys. The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. The boundaries of the ESAs shall be placed a minimum of 20 feet from the uphill side of the occurrence and 10 feet from the downhill side. Where this is not possible due to construction constraints, other protection measures, such as silt-fencing and sediment controls, may be employed to protect the occurrences. Equipment and vehicle maintenance areas, and wash areas, shall be located 100 feet from the uphill side of any ESAs. ESAs shall be clearly delineated in the field with temporary construction fencing and signs prohibiting movement of the fencing or sediment controls under penalty of work stoppages and additional compensatory mitigation. ESAs shall also be clearly identified (with signage or by mapping on site plans) to ensure that avoided plants are not inadvertently harmed during construction, operation, or closure. c. Special-Status Plant Worker Environmental Awareness Program (WEAP). The WEAP **(BIO-6)** shall include training components specific to protection of special-status plants as outlined in this Condition.	The Special-Status Plant Impact Avoidance and Minimization Measures shall be incorporated into the BRMIMP as required under DF **BIO-7**. Raw GPS data, metadata, and CNDDB field forms shall be submitted to the CPM within two weeks of the completion of each survey. A preliminary summary of results for the late summer/fall botanical surveys shall also be submitted to the CPM and BLM's State Botanist within two weeks following the completion of the surveys. If surveys are split into more than one period, then a summary letter shall be submitted following each survey period. The Final Summer-Fall Botanical Survey Report, GIS shape files and metadata shall be submitted to the BLM State Botanist and the CPM no less than 30 days prior to the start of ground-disturbing activities. The Final Report shall include a detailed accounting of the acreage of project impacts to special-status plant occurrences. The draft conceptual Special-Status Plant Mitigation Plan shall be submitted to the CPM for review and approval no less than 30 days prior to the start of ground-disturbing activities. The project owner shall immediately provide written notification to the CPM, CDFG, USFWS, and BLM if it detects a State- or Federal-Listed Species, or BLM Sensitive Species at any time during its late summer/fall botanical surveys or at any time thereafter through the life of the project, including conclusion of project decommissioning. No fewer than 30 days prior to the start of ground-disturbing activities the project owner shall submit grading plans and construction drawings to the CPM which depict the location of Environmentally Sensitive Areas and the Avoidance and Minimization Measures contained in Section A of this Condition. If compensatory mitigation is required, no less than 30 days prior to the start of ground-disturbing activities, the project owner shall submit to the CPM the form of Security adequate to acquire compensatory mitigation lands and/or undertake habitat enhancement or restoration activities, as described in this Condition. Actual Security shall be provided seven days prior to start of ground-disturbing activities. No fewer than 90 days prior to acquisition of compensatory mitigation lands, the project owner shall submit a formal acquisition proposal and draft Management Plan for the proposed lands to the CPM, with copies to CDFG, USFWS, and BLM, describing the parcels intended for purchase and shall obtain approval from the CPM prior to the acquisition. No fewer than 90 days prior to acquisition of compensatory mitigation lands, the project owner shall submit to the CPM and obtain CPM approval of any agreements to delegate land acquisition to an approved third party, or to manage compensation lands; such agreement shall be executed and implemented within 18 months of the start of ground disturbance. No fewer than 30 days after acquisition of the property the project owner shall deposit the funds required by Section I e above (long term management and maintenance fee) and provide proof of the deposit to the CPM. The project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM of such completion no later than 18 months after the start of project ground-disturbing activities. If NFWF or another approved third party is being used for the acquisition, the project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline. If habitat enhancement is proposed, no later than six months following the start of ground-disturbing activities, the project owner shall obtain CPM approval of the final Habitat Enhancement/Restoration Plan, prepared in accordance with Section D, and submit to the CPM or a third party approved by the CPM Security adequate for long-term implementation and monitoring of the Habitat Enhancement/Restoration Plan. Enhancement/restoration activities shall be initiated no later than 12 months from the start of construction. The implementation phase of the enhancement project shall be completed within five years of initiation. Until completion of the five-year implementation portion of the enhancement action, a report shall be prepared and submitted as part of the Annual Compliance Report. This report shall provide, at a minimum: a summary of activities for the preceding year and a summary of activities for the following year; quantitative measurements of the project's progress in meeting the enhancement project success criteria; detailed description of remedial actions taken or proposed; and contact information for the responsible parties. If a Distribution Study is implemented as contingency mitigation, the study shall be initiated no later than 6 months from the start of construction. The implementation phase of the study shall be completed within two years of the start of construction.			

NOTE: [4] Staff defines special-status plants as described in *Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities* (California Natural Resources Agency, Department of Fish and Game, issued November 24, 2009).

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Biological Resources (cont.)				
d. Herbicide and Soil Stabilizer Drift Control Measures. Special-status plant occurrences within 100 feet of the Project Disturbance Area shall be protected from herbicide and soil stabilizer drift. The Weed Control Program (**BIO-14**) shall include measures to avoid chemical drift or residual toxicity to special-status plants consistent with guidelines such as those provided by the Nature Conservancy's *The Global Invasive Species Team*[5], the U.S. Environmental Protection Agency, and the Pesticide Action Network Database[6]. e. Erosion and Sediment Control Measures. Erosion and sediment control measures shall not inadvertently impact special-status plants (e.g., by using invasive or non-native plants in seed mixes, introducing pest plants through contaminated seed or straw, etc.). These measures shall be incorporated in the Drainage, Erosion, and Sedimentation Control Plan required under **SOIL&WATER-1**. f. Avoid Special-Status Plant Occurrences. Areas for spoils, equipment, vehicles, and materials storage areas; parking; equipment and vehicle maintenance areas, and wash areas shall be placed at least 100 feet from any ESAs. g. Monitoring and Reporting Requirements. The Designated Botanist shall conduct weekly monitoring of the ESAs that protect special-status plant occurrences during construction and decommissioning activities. 2. **Section B: Conduct Late-Season Botanical Surveys** The project owner shall conduct late-summer/fall botanical surveys for late-season special-status plants prior to start of construction or by the end of 2010, as described below: 1. *Survey Timing*. Surveys shall be timed to detect: a) summer annuals triggered to germinate by the warm, tropical summer storms (which may occur any time between June and October). Fall-blooming perennials that respond to the cooler, later season storms (typically beginning in September or October) shall only be required if blooms and seeds are necessary for identification or the species are summer-deciduous and require leaves for identification. The surveys shall not be timed to coincide with the statistical peak bloom period of the target species but shall instead be based on plant phenology and the timing of a significant storm event (i.e., a 10mm or greater rain or multiple storm events of sufficient volume to trigger germination, as measured at or within one mile of the project site). Surveys shall occur at the appropriate time to capture the characteristics necessary to identify the taxon. 2. *Surveyor Qualifications and Training*. Surveys shall be conducted by a qualified botanist knowledgeable in the complex biology of the local flora, and consistent with CDFW protocols (CDFW 2009). Each surveyor shall be equipped with a GPS unit and record a complete tracklog; these data shall be compiled and submitted along with the Summer-Fall Survey Botanical Report (described below). Prior to the start of surveys, all crew members shall, at a minimum, visit reference sites (where available) and/or review herbarium specimens of all BLM Sensitive plants, CNPS List 1B or 2 (Nature Serve rank S1 and S2) or proposed List 1B or 2 taxa, and any new reported or documented taxa, to obtain a search image. Because the potential for range extensions is unknown, the list of potentially occurring special-status plants shall include all special-status taxa known to occur within the Sonoran Desert region and the eastern portion of the Mojave in California. The list shall also include taxa with bloom seasons that begin in fall and extend into the early spring as many of these are reported to be easier to detect in fall, following the start of the fall rains. 3. *Survey Coverage*. The survey coverage or intensity shall be in accordance with BLM Survey Protocols (issued July 2009)[7], which specify that intuitive controlled surveys shall only be accomplished by botanists familiar with the habitats and species that may reasonably be expected to occur in the project area. 4. *Documenting Occurrences*. If a special-status plant is detected, the full extent of the population onsite shall be recorded using GPS in accordance with BLM survey protocols. Additionally, the extent of the population within one mile of project boundaries shall be assessed at least qualitatively to facilitate an accurate estimation of the proportion of the population affected by the project. For populations that are very dense or very large, the population size may be estimated by simple sampling techniques. When populations are very extensive or locally abundant, the surveyor must provide some basis for this assertion and roughly map the extent on a topographic map. All but the smallest populations (e.g., a population occupying less than 100 square feet) shall be recorded as area polygons; the smallest populations may be recorded as point features. All GPS-recorded occurrences shall include: the number of plants, phenology, observed threats (e.g., OHV or invasive exotics), and habitat or community type. The map of occurrences submitted with the final botanical report shall be prepared to ensure consistency with definition of an occurrence by CNDDB, i.e., occurrences found within 0.25 miles of another occurrence of the same taxon, and not separated by significant habitat discontinuities, shall be combined into a single 'occurrence'. The project owner shall also submit the raw GPS shape files and metadata, and completed CNDDB forms for each 'occurrence' (as defined by CNDDB).	Within 18 months of ground-disturbing activities, the project owner shall transfer to the CPM or an approved third party the difference between the Security paid and the actual costs of (1) acquiring compensatory mitigation lands, completing initial protection and habitat improvement, and funding the long-term maintenance and management of compensatory mitigation lands; and/or (2) implementing and providing for the long-term protection and monitoring of habitat enhancement or restoration activities. Implementation of the special-status plant impact avoidance and minimization measures shall be reported in the Monthly Compliance Reports prepared by the Designated Botanist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, in consultation with the BLM State Botanist, a written construction termination report identifying how measures have been completed. The project owner shall submit a monitoring report every year for the life of the project to monitor effectiveness of protection measures for all avoided special-status plants to the CPM and BLM State Botanist. The monitoring report shall include: dates of worker awareness training sessions and attendees, completed CNDDB field forms for each avoided occurrence on-site and within 100 feet of the project boundary off-site, and description of the remedial action, if warranted and planned for the upcoming year. The completed forms shall include an inventory of the special-status plant occurrences and description of the habitat conditions, an indication of population and habitat quality trends.			

NOTES:
[5] Hillmer, J. & D. Liedtke. 2003. Safe herbicide handling: a guide for land stewards and volunteer stewards. Ohio Chapter, The Nature Conservancy, Dublin, OH. 20 pp. Online: <http://www.invasive.org/gist/products.html.
[6] Pesticide Action Network of North America. Kegley, S.E., Hill, B.R., Orme S., Choi A.H., PAN Pesticide Database, Pesticide Action Network, North America. San Francisco, CA, 2010 <http://www.pesticideinfo.org>
[7] Bureau of Land Management (BLM), California State Office. Survey Protocols Required for NEPA/ESA Compliance for BLM Special Status Plant Species. Issued, July 2009.

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
5. *Reporting*. Raw GPS data, metadata, and CNDDB field forms shall be provided to the CPM within two weeks of the completion of each survey. If surveys are split into two or more periods (e.g., a late summer survey and a fall survey), then a summary letter shall be submitted following each survey period. The Final Summer-Fall Botanical Survey Report shall be prepared consistent with CDFW guidelines (CDFW 2009), and BLM 2009 guidelines and shall include all of the following components: a. the BLM designation, NatureServe Global and State Rank of each species or taxon found (or proposed rank, or CNPS List); b. the number or percent of the occurrence that will be directly affected, and indirectly affected by changes in drainage patterns or altered geomorphic processes; c. the habitat or plant community that supports the occurrence and the total acres of that habitat or community type that occurs in the Project Disturbance Area; d. an indication of whether the occurrence has any local or regional significance (e.g., if it exhibits any unusual morphology, occurs at the periphery of its range in California, represents a significant range extension or disjunct occurrence, or occurs in an atypical habitat or substrate); e. a completed CNDDB field form for every occurrence (occurrences of the same species within one-quarter mile or less of each other combined as one occurrence, consistent with CNDDB methodology), and f. two maps: one that depicts the raw GPS data (as collected in the field) on a topographic base map with project features; and a second map that follows the CNDDB protocol for occurrence mapping. 3. **Section C: Avoidance Requirements for Special-Status Plants Detected in the Summer/Fall 2010 Surveys** The project owner shall apply the following avoidance standards to late blooming special-status plants that might be detected during late summer/fall season surveys. Avoidance and/or the mitigation measures described in Section D below would reduce impacts to these special-status plant species to less than significant levels. 1. *Mitigation for CNDDB Rank 1 Plants (Critically Imperiled) - Avoidance Required:* If late blooming species with a CNDDB rank of 1 are detected within the Project Disturbance Area the project owner shall prepare and implement a Special-Status Plant Mitigation Plan (Plan). The goal of the Plan shall be to retain at least 75 percent of the local population of the affected species. Compensatory mitigation, as described in Section D of this Condition, and at a mitigation ratio of 3:1, shall be required for the 25 percent or portion that is not avoided. The Plan shall include, at a minimum, the following components and definitions: a. A description of the occurrences of the CNDDB rank 1 species on the project, ecological characteristics such as micro-habitat requirements, ecosystem processes required for maintenance of the habitat, reproduction and dispersal mechanisms, pollinators, local distribution, a description of the extent of the population off-site, the percentage of the local population affected, and a description of how these occurrences would be impacted by the project, including direct and indirect effects. The “local population” shall include the number of individuals occurring within the Palo Verde Watershed boundaries. Occurrences shall be considered impacted if they are within the project footprint, and if they would be affected by project-related hydrologic changes or changes to the local sand transport system. b. A description of the avoidance and minimization measures that would achieve complete avoidance of occurrences on the project linears and construction laydown areas, unless such avoidance would create greater environmental impacts in other resource areas (e.g. Cultural Resource Sites) or other restrictions (e.g., FAA or other restrictions for placement of transmission poles). c. A description of the measures that would be implemented to avoid or minimize impacts to occurrences on the solar facility. Avoidance is generally considered not feasible if the species is located within the Permanent Project Disturbance Area (bounded by the permanent tortoise exclusion fence and the drainage channels). d. If avoidance on the linears, construction laydown areas, and solar facility combined protect less than 75 percent of the local population of the affected species, the project owner shall implement offsite mitigation that demonstrates that the impacts will not cause a loss of viability for that species. Implementation of the compensatory offsite mitigation must meet the performance standards described in section D of this Condition, and may include land acquisition or implementation of a restoration/enhancement program for the species. e. “Avoidance” shall include protection of the ecosystem processes essential for maintenance of the protected plant occurrence. For all but one of the late blooming plant species with potential to occur, the plant species are annuals that depend on a viable seed bank to maintain population health and persistence. The primary goal of avoidance for these annual species will be protection of the soil integrity and the seed bank that is closely associated with undisturbed soils. Any impacts to the soil structure or surface features will be considered an impact, but measures like temporary mowing or brush removal that does not disturb the soil will not be considered impacts to the population. Isolated ‘islands’ of protected plants disconnected by the project from natural fluvial, aeolian (wind), or other processes essential for maintenance of the species, shall not be considered to be protected and shall not be credited as contributing to the 75 percent avoidance requirement because such isolated populations are not sustainable.				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
2. *Mitigation for CNDDB Rank 2 Plants (Imperiled) –Avoidance on Linears Required:* If species with a CNDDB rank of 2 are detected within the Project Disturbance Area, the project owner shall prepare and implement a Special-Status Plant Mitigation Plan (Plan) that describes measures to achieve complete avoidance of occurrences on the project linears and construction laydown areas, unless such avoidance would create greater environmental impacts in other resource areas (e.g. Cultural Resource Sites) or other restrictions (e.g., FAA or other restrictions for placement of transmission poles). The project owner shall provide compensatory mitigation, at a ratio of 2:1, as described below in Section D for impacts to Rank 2 plants that could not be avoided. The content of the Plan and definitions shall be as described above in subsection C.1. 3. *Mitigation for CNDDB Rank 3 Plants – No On-Site Avoidance Required Unless Local or Regional Significance:* If species with a CNDDB rank of 3 are detected within the Project Disturbance Area, no onsite avoidance or compensatory mitigation shall be required unless the occurrence has local or regional significance, in which case the plant occurrence shall be treated as a CNDDB rank 2 plant species. A plant occurrence would be considered to have local or regional significance if: a. It occurs at the outermost periphery of its range in California; b. It occurs in an atypical habitat, region, or elevation for the taxon that suggests that the occurrence may have genetic significance (e.g., that may increase its ability to survive future threats), or; c. It exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or sub-species. 4. *Pre-Construction Notification for State- or Federal-Listed Species, or BLM Sensitive Species.* If a state or federal-listed species or BLM Sensitive species is detected, the project owner shall immediately notify the CDFW, USFWS, BLM, and the CPM. 5. *Preservation of the Germplasm of Affected Special-Status Plants.* For all significant impacts to special-status plants, regardless of whether compensatory mitigation is required, mitigation shall include seed collection from the affected special-status plants on-site prior to construction to conserve the germplasm and provide a seed source for restoration efforts. The seed shall be collected under the supervision or guidance of a reputable seed storage facility such as the Rancho Santa Ana Botanical Garden Seed Conservation Program, San Diego Natural History Museum, or the Missouri Botanical Garden. The costs associated with the long-term storage of the seed shall be the responsibility of the project owner. Any efforts to propagate and reintroduce special-status plants from seeds in the wild shall be carried out under the direct supervision of specialists such as those listed above and as part of a Habitat Restoration/Enhancement Plan approved by the CPM. 4. **Section D: Off-Site Compensatory Mitigation for Special-Status Plants** Where compensatory mitigation is required under the terms of Section C, above, the project owner shall mitigate project impacts to special-status plant occurrences with compensatory mitigation. Compensatory mitigation shall consist of acquisition of habitat supporting the target species, or restoration/enhancement of populations of the target species, and shall meet the performance standards for mitigation described below. In the event that no opportunities for acquisition or restoration/enhancement exist, the project owner can fund a species distribution study designed to promote the future preservation, protection or recovery of the species. Compensatory mitigation shall be at a ratio of 3:1 for Rank 1 plants, with three acres of habitat acquired or restored/enhanced for every acre of habitat occupied by the special status plant that will be disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively measured is one-fourth acre than the compensatory mitigation will be three-fourths of an acre). The mitigation ratio for Rank 2 plants shall be 2:1. So, for the example above, the mitigation ratio would be one-half acre for the Rank 2 plants. The project owner shall provide funding for the acquisition and/or restoration/enhancement, initial improvement, and long-term maintenance and management of the acquired or restored lands. The actual costs to comply with this Condition will vary depending on the Project Disturbance Area, the actual costs of acquiring compensation habitat, the actual costs of initially improving the habitat, the actual costs of long-term management as determined by a Property Analysis Record (PAR) report, and other transactional costs related to the use of compensatory mitigation. The project owner shall comply with other related requirements in this Condition: **I.** ***Compensatory Mitigation by Acquisition:*** The requirements for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of special-status plant compensation lands include all of the following: 1. *Selection Criteria for Acquisition Lands.* The compensation lands selected for acquisition may include any of the following three categories: a. Occupied Habitat, No Habitat Threats. The compensation lands selected for acquisition shall be occupied by the target plant population and shall be characterized by site integrity and habitat quality that are required to support the target species, and shall be of equal or better habitat quality than that of the affected occurrence. The occurrence of the target special-status plant on the proposed acquisition lands should be viable, stable or increasing (in size and reproduction).				

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Biological Resources (cont.)				
b. Occupied Habitat, Habitat Threats. Occupied compensation lands characterized by habitat threats may also be acquired as long as the population could be reasonably expected to recover with habitat restoration efforts (e.g., OHV or grazing exclusion, or removal of invasive non-native plants) and is accompanied by a Habitat Enhancement/Restoration Plan as described in Section D.II, below. c. Unoccupied but Adjacent. The project owner may also acquire habitat for which occupancy by the target species has not been documented, if the proposed acquisition lands are adjacent to occupied habitat. The project owner shall provide evidence that acquisitions of such unoccupied lands would improve the defensibility and long-term sustainability of the occupied habitat by providing a protective buffer around the occurrence and by enhancing connectivity with undisturbed habitat. This acquisition may include habitat restoration efforts where appropriate, particularly when these restoration efforts will benefit adjacent habitat that is occupied by the target species. 2. *Review and Approval of Compensation Lands Prior to Acquisition*. The project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for special-status plants in relation to the criteria listed above, and must be approved by the CPM. 3. *Management Plan*. The project owner or approved third party shall prepare a management plan for the compensation lands in consultation with the entity that will be managing the lands. The goal of the management plan shall be to support and enhance the long-term viability of the target special-status plant occurrences. The Management Plan shall be submitted for review and approval to the CPM. 4. *Integrating Special-Status Plant Mitigation with Other Mitigation lands.* If all or any portion of the acquired Desert Tortoise, Waters of the State, or other required compensation lands meets the criteria above for special-status plant compensation lands, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the obligation for special-status plant mitigation. 5. *Compensation Lands Acquisition Requirements.* The project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM, has approved the proposed compensation lands: Preliminary Report. The project owner, or an approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board. Title/Conveyance. The project owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement, as required by the CPM. Any transfer of a conservation easement or fee title must be to CDFW, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPM. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFW or another entity approved by the CPM. If an entity other than CDFW holds a conservation easement over the compensation lands, the CPM may require that CDFW or another entity approved by the CPM, in consultation with CDFW, be named a third party beneficiary of the conservation easement. The project owner shall obtain approval of the CPM of the terms of any transfer of fee title or conservation easement to the compensation lands. Initial Protection and Habitat Improvement. The project owner shall fund activities that the CPM requires for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities shall be estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010,* or more current guidance from the REAT at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, but actual costs will vary depending on the measures that are required for the compensation lands. A non-profit organization, CDFW or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFW, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFW takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFW or its designee. Property Analysis Record. Upon identification of the compensation lands, the project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPM before it can be used to establish funding levels or management activities for the compensation lands.				

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Biological Resources (cont.)				
Long-term Maintenance and Management Funding. In accordance with **BIO-28** (phasing), the project owner shall deposit in NFWF's REAT Account a non-wasting capital long-term maintenance and management fee in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis conducted for the compensation lands. The CPM, in consultation with CDFW, may designate another non-profit organization to hold the long-term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity. If CDFW takes fee title to the compensation lands, CDFW shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFW and with CDFW supervision. Interest, Principal, and Pooling of Funds. The project owner shall ensure that an agreement is in place with the long-term maintenance and management fund (endowment) holder/manager to ensure the following requirements are met: Interest. Interest generated from the initial capital long-term maintenance and management fund shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action that is approved by the CPM and is designed to protect or improve the habitat values of the compensation lands. Withdrawal of Principal. The long-term maintenance and management fund principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM or by the approved third-party long-term maintenance and management fund manager, to ensure the continued viability of the species on the compensation lands. Pooling Long-Term Maintenance and Management Funds. An entity approved to hold long-term maintenance and management funds for the project may pool those funds with similar non-wasting funds that it holds from other projects for long-term maintenance and management of compensation lands for special-status plants. However, for reporting purposes, the long-term maintenance and management funds for this project must be tracked and reported individually to the CPM. Other Expenses. In addition to the costs listed above, the project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to the title and document review costs incurred from other state agency reviews, overhead related to providing compensation lands to CDFW or an approved third party, escrow fees or costs, environmental contaminants clearance, and other site cleanup measures. Mitigation Security. The project owner shall provide financial assurances in accordance with **BIO-28** (phasing) to the CPM to guarantee that an adequate level of funding is available to implement any of the mitigation measures required by this Condition that are not completed prior to the start of ground-disturbing project activities. Financial assurances shall be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") approved by the CPM. The amount of the Security shall be estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010,* or more current guidance from the REAT agencies, at a ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is significantly impacted by the project. The actual costs to comply with this Condition will vary depending on the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a PAR report. Prior to submitting the Security to the CPM, the project owner shall obtain the CPM's approval of the form of the Security. The CPM may draw on the Security if the CPM determines the project owner has failed to comply with the requirements specified in this Condition. The CPM may use money from the Security solely for implementation of the requirements of this Condition. The CPM's use of the Security to implement measures in this Condition may not fully satisfy the project owner's obligations under this Condition, and the project owner remains responsible for satisfying the obligations under this Condition if the Security is insufficient. The unused Security shall be returned to the project owner in whole or in part upon successful completion of the associated requirements in this Condition. The project owner may elect to comply with the requirements in this Condition for acquisition of compensation lands, initial protection and habitat improvement on the compensation lands, or long-term maintenance and management of the compensation lands by funding, or any combination of these three requirements, by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF). To use this option, the project owner must make an initial deposit to the REAT Account in an amount equal to the estimated costs (as set forth in the Security section of this Condition) of implementing the requirement. If the actual cost of the acquisition, initial protection and habitat				

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Biological Resources (cont.)				
improvements, or long-term funding is more than the estimated amount initially paid by the project owner, the project owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, and the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the Applicant, the remaining balance shall be returned to the project owner. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFW, BLM and USFWS, prior to land acquisition, enhancement or management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project. II. **Compensatory Mitigation by Habitat Enhancement/Restoration:** As an alternative or adjunct to land acquisition for compensatory mitigation the project owner may undertake habitat enhancement or restoration for the target special-status plant species. Habitat enhancement or restoration activities must achieve protection at a 3:1 ratio for Rank 1 plants and 2:1 for Rank 2 plants, with improvements applied to three acres, or two acres, respectively, of habitat for every acre special-status plant habitat directly or indirectly disturbed by the Project Disturbance Area (for example if the area occupied by the special status plant collectively measured is one-fourth acre than the improvements would be applied to an area equal to three-fourths of an acre at a 3:1 ratio, or one-half acre at a 2:1 ratio). Examples of suitable enhancement projects include but are not limited to the following: i) control unauthorized vehicle use into an occurrence (or pedestrian use if clearly damaging to the species); ii) control of invasive non-native plants that infest or pose an immediate threat to an occurrence; iii) exclude grazing by wild burros or livestock from an occurrence; or iv) restore lost or degraded hydrologic or geomorphic functions critical to the species by restoring previously diverted flows, removing obstructions to the wind sand transport corridor above an occurrence, or increasing groundwater availability for dependent species. If the project owner elects to undertake a habitat enhancement project for mitigation, the project must meet the following performance standards: The proposed enhancement project shall achieve rescue of an off-site occurrence that is currently assessed, based on the NatureServe threat ranking system[8] with one of the following threat ranks: a) long-term decline >30 percent; b) an immediate threat that affects >30 percent of the population, or c) has an overall threat impact that is High to Very High. "Rescue" would be considered successful if it achieves an improvement in the occurrence trend to "stable" or "increasing" status, or downgrading of the overall threat rank to slight or low (from "High" to "Very High"). If the project owner elects to undertake a habitat enhancement project for mitigation, they shall submit a Habitat Enhancement/Restoration Plan to the CPM for review and approval, and shall provide sufficient funding for implementation and monitoring of the Plan. The amount of the Security shall be estimated based on the *Desert Renewable Energy REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account, July 23, 2010,* or more current guidance from the REAT agencies, at the ratio of 3:1 for Rank 1 plants and 2:1 for Rank 2 plants, for every acre of habitat supporting the target special-status plant species which is directly or indirectly impacted by the project. The amount of the security may be adjusted based on the actual costs of implementing the enhancement, restoration and monitoring. The implementation and monitoring of the enhancement/restoration may be undertaken by an appropriate third party such as NFWF, subject to approval by the CPM. The Habitat Enhancement/Restoration Plan shall include each of the following: 1. *Goals and Objectives*. Define the goals of the restoration or enhancement project and a measurable course of action developed to achieve those goals. The objective of the proposed habitat enhancement plan shall include restoration of a target special-status plant occurrence that is currently threatened with a long-term decline. The proposed enhancement plan shall achieve an improvement in the occurrence trend to "stable" or "increasing" status, or downgrading of the overall threat rank to slight or low (from "High" to "Very High"). 2. *Historical Conditions*. Provide a description of the pre-impact or historical conditions (before the site was degraded by weeds or grazing or ORV, etc.), and the desired conditions. 3. *Site Characteristics*. Describe other site characteristics relevant to the restoration or enhancement project (e.g., composition of native and pest plants, topography and drainage patterns, soil types, geomorphic and hydrologic processes important to the site or species.				

NOTE:
[8] Master, L., D. Faber-Langendoen, R. Bittman, G. A., Hammerson, B. Heidel, J. Nichols, L. Ramsay, and A. Tomaino. 2009. *NatureServe Conservation Status Assessments: Factors for Assessing Extinction Risk.* NatureServe, Arlington, VA. Online: http://www.natureserve.org/publications/ConsStatusAssess_StatusFactors.pdf, "Threats". See also: Morse, L.E., J.M. Randall, N. Benton, R. Hiebert, and S. Lu. 2004. An Invasive Species Assessment Protocol: Evaluating Non-Native Plants for Their Impact on Biodiversity. Version 1. NatureServe, Arlington, Virginia. Online: http://www.natureserve.org/publications/pubs/invasiveSpecies.pdf

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		Initials	Date	Remarks
Biological Resources (cont.)				
4. *Ecological Factors*. Describe other important ecological factors of the species being protected, restored, or enhanced such as total population, reproduction, distribution, pollinators, etc. 5. *Methods*. Describe the restoration methods that will be used (e.g., invasive exotics control, site protection, seedling protection, propagation techniques, etc.) and the long-term maintenance required. The implementation phase of the enhancement must be completed within five years. 6. *Budget*. Provide a detailed budget and time-line, and develop clear, measurable, objective-driven annual success criteria. 7. *Monitoring*. Develop clear, measurable monitoring methods that can be used to evaluate the effectiveness of the restoration and the benefit to the affected species. The Plan shall include a minimum of five years of quarterly monitoring, and then annual monitoring for the remainder of the enhancement project, and until the performance standards for rescue of a threatened occurrence are met. At a minimum the progress reports shall include: quantitative measurements of the projects progress in meeting the enhancement project success criteria, detailed description of remedial actions taken or proposed, and contact information for the responsible parties. 8. *Reporting Program*. The Plan shall ensure accountability with a reporting program that includes progress toward goals and success criteria. Include names of responsible parties. 9. *Contingency Plan*. Describe the contingency plan for failure to meet annual goals. 10. *Long-term Protection*. Include proof of long-term protection for the restoration site. For private lands this would include conservations easements or other deed restrictions; projects on public lands must be contained in a Desert Wildlife Management Area, Wildlife Habitat Management Area, or other land use protections that will protect the mitigation site and target species. **III. *Compensatory Mitigation by Conducting or Contributing to a Special-Status Plant Species Distribution Study:*** As a contingency measure in the event that there are no opportunities for acquisition or restoration/enhancement, a Scientific Study of Special-status Plant Species Distribution Study may be funded. Distribution and occurrence health data is very limited for many of the sensitive species that occur on the project or have potential to occur on the project, especially the late summer and fall blooming species. Some of these late blooming species are only known from a few viable occurrences in California, and historic occurrences that have not been re-located or surveyed since they were first documented. The objectives of this study would be to better understand the full distribution of the affected species, the degree and immediacy of threats to occurrences, and ownership and management opportunities, with the primary goal of future preservation, protection, or recovery. This study would include the following: 1. *Historical Occurrence Review*. The Study would include an evaluation of historical localities for the species known to occur on the project or with potential to occur. This would include a review of the CNDDB database, herbarium records from regional herbaria (U.C. Riverside, San Diego Natural History Museum, etc.), other biotechnical reports from the region, and information from regional botanical experts. 2. *Conduct Site Visits to Historical Localities*. Historical occurrences would be evaluated in the field during the appropriate time of the year for each late blooming species. If located, these occurrences would be evaluated for population size, numbers, plant associates, soils, habitat quality, and potential threats, degree and immediacy of threats, ownership and management opportunities. GPS location data would also be collected during these site visits. 3. *Survey Areas with habitat potential that surround each of these species occurrences to better determine the full range of distribution*. If additional populations are found, collect data (GPS and assessment) on these additional populations consistent with III.2 above. 4. *Prepare a Distribution Study Report*. A report that discusses the finding from the historical information and the range extension surveys would be prepared that summarizes the information for each of the late season surveys. This report will provide valuable information and a better understanding of the actual distribution of these late blooming species within California and will help to determine when and when not there is potential for these species to occur. This valuable information will include a better understand of the ecological factors driving the distribution of these species and will help to better target appropriate habitat for both future surveys as well as potential future mitigation lands. All data from this study will be submitted for incorporation into the CNDDB system and the study report will be made available to resource agencies, conservation groups, and other interested parties. Currently there is no program or study in place that is attempting to address the distributional issues for these late blooming species. If an existing study is identified or if one is developed prior to the study outlined here, an option to fund the existing study may be considered. If an existing study cannot be indentified then one will be developed that follows the guidelines discussed above. The funding provided for the program would be no greater than the cost for acquisition, enhancement, and long-term management of compensatory mitigation lands based on impacts to late blooming sensitive plant species.				

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		Initials	Date	Remarks
Biological Resources (cont.)				
DF BIO-20: Sand Dune/Fringe-Toed Lizard Mitigation. To mitigate for habitat loss and direct impacts to Mojave fringe-toed lizards the project owner shall provide compensatory mitigation at a 3:1 ratio, which may include compensation lands purchased in fee or in easement in whole or in part, for impacts to stabilized or partially stabilized desert dune habitat (25.3 acres or the acreage of sand dune/partially stabilized sand dune habitat impacted by the final project footprint from the project interconnection to the Colorado River Substation). If compensation lands are acquired, the project owner shall provide funding for the acquisition in fee title or in easement, initial habitat improvements and long-term maintenance and management of the compensation lands. 1. ***Criteria for Compensation Lands*:** The compensation lands selected for acquisition shall: a. Be sand dune or partially stabilized sand dune habitat within the Palen Valley or Chuckwalla Valley with potential to contribute to Mojave fringe-toed lizard habitat connectivity and build linkages between known populations of Mojave fringe-toed lizards and preserve lands with suitable habitat; b. To the extent feasible, be connected to lands currently occupied by Mojave fringe-toed lizard; c. To the extent feasible, be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation; d. Provide quality habitat for Mojave fringe-toed lizard, that has the capacity to regenerate naturally when disturbances are removed; e. Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible; f. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration; g. Not contain hazardous wastes that cannot be removed to the extent the site is suitable for habitat; h. Not be subject to property constraints (i.e. mineral leases, cultural resources); and i. Be on land for which long-term management is feasible. 2. ***Security for Implementation of Mitigation*:** The project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of Mojave fringe-toed lizard habitat as described in this Condition. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM according to the measures outlined in **BIO-12**, and within the time period specified for this assurance (see the verification section at the end of this Condition). The final amount due will be determined by an updated appraisal and a PAR analysis conducted as described in **BIO-12**. 3. ***Preparation of Management Plan:*** The project owner shall submit to the CPM, BLM, CDFW and USFWS a draft Management Plan that reflects site-specific enhancement measures for the Mojave fringe-toed lizard habitat on the acquired compensation lands. The objective of the Management Plan shall be to enhance the value of the compensation lands for Mojave fringe-toed lizards, and may include enhancement actions such as weed control, fencing to exclude livestock, erosion control, or protection of sand sources or sand transport corridors.	No later than 30 days prior to beginning site mobilization and construction activities, the project owner shall provide written verification of approved form of Security in accordance with this Condition of Certification. Actual Security shall be provided no later than seven days prior to the beginning of project ground-disturbing activities. The project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities. No less than 90 days prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to BLM, the CPM, CDFW and USFWS describing the parcels intended for purchase. The project owner, or an approved third party, shall provide BLM, the CPM, **CDFW** and USFWS with a management plan for the compensation lands and associated funds within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with BLM**,** CDFW and the USFWS. Within 90 days after completion of project construction, the project owner shall provide to the CPM an analysis with the final accounting of the amount of sand dune/stabilized sand dune habitat disturbed during project construction. The project owner shall provide written verification to BLM, the CPM, USFWS, and CDFW that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months from the start of ground-disturbing activities.			
DF BIO-21 (Deleted)				
DF BIO-22: Mitigation for Impacts to State Waters. The project owner shall implement the following measures to avoid, minimize and mitigate for direct and indirect impacts to waters of the state and to satisfy requirements of California Fish and Game Code sections 1600 and 1607. 1. ***Acquire Off-Site State Waters:*** The project owner shall acquire, in fee or in easement, a parcel or parcels of land that includes at least 412 acres of state jurisdictional waters, or the area of state waters directly or indirectly impacted by the final project footprint. The project footprint means all lands disturbed by construction and operation of the Blythe Project, including all linears. The parcel or parcels comprising the 412 acres of ephemeral washes shall include at least 66 acres of desert dry wash woodland or the acreage of desert dry wash woodland impacted by the final project footprint at a 3:1 ratio. The terms and conditions of this acquisition or easement shall be as described in Condition of Certification **BIO-12** and the timing associated with **BIO-28** (phasing). Mitigation for impacts to state waters shall be within the Chuckwalla Valley or Colorado River Hydrological Units (HUs), as close to the project site as practicable. 2. ***Security for Implementation of Mitigation:*** The project owner shall provide financial assurances to the CPM and CDFW to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of state waters as described in this Condition. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM and CDFW in the form of an irrevocable letter of credit, a pledged savings account or Security prior to initiating ground-disturbing project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with BLM**,** CDFW and the USFWS, to ensure funding. The final amount due will be determined by and updated appraisal and a PAR analysis conducted pursuant to **BIO-12**.	No less than 30 days prior to the start of construction-related ground disturbance activities potentially affecting waters of the state, the project owner shall provide written verification (i.e., through incorporation into the BRMIMP) to the CPM that the above best management practices will be implemented. The project owner shall also provide a discussion of work in waters of the state in Compliance Reports for the duration of the project. No less than 30 days prior to beginning site mobilization and construction activities, the project owner shall provide the form of Security in accordance with this Condition of Certification. No later than seven days prior to beginning project site mobilization and construction activities, the project owner shall provide written verification of the actual Security. The project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities. The project owner, or an approved third party, shall provide BLM, the CPM, CDFW and USFWS with a management plan for the compensation lands and associated funds within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with CDFW. Within 90 days after completion of project construction, the project owner shall provide to the CPM and CDFW an analysis with the final accounting of the amount of jurisdictional state waters disturbed during project construction.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
3. ***Preparation of Management Plan:*** The project owner shall submit to the CPM and CDFW a draft Management Plan that reflects site-specific enhancement measures for the drainages on the acquired compensation lands. The objective of the Management Plan shall be to enhance the wildlife value of the drainages, and may include enhancement actions such as weed control, fencing to exclude livestock, or erosion control. 4. ***Code of Regulations:*** The project owner shall provide a copy of this Condition (Condition of Certification **BIO-22**) from the Energy Commission Decision to all contractors, subcontractors, and the project owner's project supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFW personnel upon demand. The CPM reserves the right to issue a stop work order or allow CDFW to issue a stop work order after giving notice to the project owner, the CPM, if the CPM in consultation with CDFW, determines that the project owner has breached any of the terms or Conditions or for other reasons, including but not limited to the following: a. The information provided by the project owner regarding streambed alteration is incomplete or inaccurate; b. New information becomes available that was not known to it in preparing the terms and Conditions; or c. The project or project activities as described in the Staff Assessment have changed. 5. **Best Management Practices:** The project owner shall also comply with the following Conditions to protect drainages near the Project Disturbance Area: a. The project owner shall minimize road building, construction activities and vegetation clearing within ephemeral drainages to the extent feasible. b. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows. c. The project owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the project owner to ensure compliance. d. Spoil sites shall not be located at least 30 feet from the boundaries and drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages. e. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage by the project owner or any party working under contract or with the permission of the project owner, shall be removed immediately. f. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the state. g. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage. h. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.	The project owner shall provide written verification to BLM, the CPM, USFWS and CDFW that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months from adoption of the Final Energy Commission Decision for the Blythe Solar Power Project). The project owner shall notify the CPM and CDFW, in writing, at least five days prior to initiation of project activities in jurisdictional state waters and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM and CDFW of any change of conditions to the project, impacts to state waters, or the mitigation efforts. The notifying report shall be provided to the CPM and CDFW no later than seven days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports or until it is deemed unnecessary by the CPM and CDFW.			
DF BIO-23: Decommissioning and Reclamation Plan. Upon project closure the project owner shall implement a final Decommissioning and Reclamation Plan. The Decommissioning and Reclamation Plan shall include a cost estimate for implementing the proposed decommissioning and reclamation activities, and shall be consistent with the guidelines in BLM's 43 CFR 3809.550 et seq.	No fewer than 30 days prior to the start of site mobilization and construction activities the project owner shall provide to the CPM (for review) and BLM's Authorized Officer (for review and approval) a draft Decommissioning and Reclamation Plan. The plan shall be finalized prior to the start of commercial operation and reviewed every five years thereafter and submitted to the CPM for review and to the BLM's Authorized Officer for approval. Modifications to the approved Decommissioning and Reclamation Plan shall be made only after approval from BLM's Authorized Officer. The project owner shall provide a copy of the approved Decommissioning and Reclamation Plan and any BLM approved revisions to the CPM.			
DF BIO-24: Golden Eagle Inventory and Monitoring. The project owner shall implement the following measures to avoid or minimize project-related construction impacts to golden eagles. 1. ***Annual Inventory.*** For each calendar year during which construction will occur and for up to two years after commercial operation begins 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) 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.	No fewer than 30 days from completion of the golden eagle inventory the project owner shall submit a report to the CPM, CDFW, 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 CDFW within one working day of detection of the nest for interim guidance on monitoring and nest protection. The project owner shall provide the CPM, CDFW, 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 CDFW.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
3. ***Monitoring and Adaptive Management Plan:*** If an occupied nest[9] 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 USFWS Land Based Wind Energy Guidelines (2011b) or more current guidance from the USFWS or CPM. 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 to be the source of golden eagle disturbance.				
DF BIO-25: Evaporation Pond Netting and Monitoring. The project owner shall cover the evaporation ponds prior to any discharge with mesh netting designed to exclude birds and other wildlife from drinking or landing on the water of the ponds. Netting mesh sizes approval shall be determined by the CPM in consultation with CDFW and USFWS. The netted ponds shall be monitored regularly to verify that the netting remains intact, is fulfilling its function in excluding birds and other wildlife from the ponds, and does not pose an entanglement threat to birds and other wildlife. The ponds shall include a visual deterrent in addition to the netting, and the pond shall be designed such that the netting shall never contact the water. Monitoring of the evaporation ponds shall include the following: 1. ***Monthly Monitoring.*** The Designated Biologist or Biological Monitor shall regularly survey the ponds at least once per month starting with the first month of operation of the evaporation ponds. The purpose of the surveys shall be to determine if the netted ponds are effective in excluding birds, if the nets pose an entrapment hazard to birds and wildlife, and to assess the structural integrity of the nets. The monthly surveys shall be conducted in one day for a minimum of two hours following sunrise (i.e., dawn), a minimum of one hour mid-day (i.e., 1100 to 1300), and a minimum of two hours preceding sunset (i.e., dusk) in order to provide an accurate assessment of bird and wildlife use of the ponds during all seasons. Surveyors shall be experienced with bird identification and survey techniques. Operations staff at the project site shall also report finding any dead birds or other wildlife at the evaporation ponds to the Designated Biologist within one day of the detection of the carcass. The Designated Biologists shall report any bird or other wildlife deaths or entanglements within two days of the discovery to the CPM, CDFW, and USFWS. 2. ***Dead or Entangled Birds.*** If dead or entangled birds are detected, the Designated Biologist shall take immediate action to correct the source of mortality or entanglement. The Designated Biologist shall make immediate efforts to contact and consult the CPM, CDFW, and USFWS by phone and electronic communications prior to taking remedial action upon detection of the problem, but the inability to reach these parties shall not delay taking action that would, in the judgment of the Designated Biologist, prevent further mortality of birds or other wildlife at the evaporation ponds. 3. ***Quarterly Monitoring.*** If after 12 consecutive monthly site visits no bird or wildlife deaths or entanglements are detected at the evaporation ponds by or reported to the Designated Biologist, monitoring can be reduced to quarterly visits. 4. ***Biannual Monitoring.*** If after 12 consecutive quarterly site visits no bird or wildlife deaths or entanglements are detected by or reported to the Designated Biologist and with approval from the CPM, USFWS and CDFW, future surveys may be reduced to two surveys per year, during the spring nesting season and during fall migration. If approved by the CPM, USFWS and CDFW, monitoring outside the nesting season may be conducted by the Environmental Compliance Manager. 5. ***Modification of Monitoring Program.*** Without respect to the above requirements the project owner, CDFW or USFWS may submit to the CPM a request for modifications to the evaporation pond monitoring program based on information acquired during monitoring, and may also suggest adaptive management measures to remedy any problems that are detected during monitoring or modifications if bird impacts are not observed. Modifications to the evaporation pond monitoring described above and implementation of adaptive management measures shall be made only after approval from the CPM, in consultation with USFWS and CDFW. In addition, the project owner shall prepare and implement measures that will prevent Couch's spadefoot toads from using the evaporative basins (see Condition of Certification **BIO-26**)	No less than 30 days prior to operation of the evaporation ponds the project owner shall provide to the CPM as-built drawings and photographs of the ponds indicating that the bird exclusion netting has been installed. For the first year of operation the Designated Biologist shall submit quarterly reports to the CPM, CDFW, and USFWS describing the dates, durations and results of site visits conducted at the evaporation ponds. Thereafter the Designated Biologist shall submit annual monitoring reports with this information. The quarterly and annual reports shall fully describe any bird or wildlife death or entanglements detected during the site visits or at any other time, and shall describe actions taken to remedy these problems.			
DF BIO-26: Couch's Spadefoot Toad Impact Avoidance and Minimization Measures. The project owner shall prepare and implement a Couch's Spadefoot Toad Protection and Mitigation Plan (Protection and Mitigation Plan) to avoid, minimize or mitigate impacts to Couch's spadefoot toads and their breeding habitat during construction and operation of the project. The Protection and Mitigation Plan shall be approved by the CPM in consultation with CDFW, and shall be incorporated into the project's BRMIMP and implemented. It is expected that, as currently proposed, the project would impact three potential breeding ponds.	No less than 30 days prior to any project-related ground disturbance, the project owner shall submit to the CPM and CDFW, a final Protection and Mitigation Plan. The Protection and Mitigation Plan shall address on-site protection and mitigation measures to be implemented during construction. Modifications to the Protection and Mitigation Plan shall be made only after approval from the CPM, in consultation with CDFW.			

NOTE: [9] 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.

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
The Protection and Mitigation Plan shall address methods to achieve this avoidance and minimization, and shall include avoidance, minimization, and mitigation measures that would be required if additional habitat or Couch's spadefoot toad are found during habitat surveys. The Protection and Mitigation Plan shall include, at a minimum: 1. ***Habitat Survey Results:*** a. Survey methodology that focuses on areas that are susceptible to ponding (such as areas that are disturbed and/or artificially compacted); b. Survey results, including a detailed discussion of potential breeding sites, and a description of areas determined not to include breeding habitat; and c. Figures showing the areas surveyed and the location of potential breeding habitat in relation to proposed project features. 2. ***Impacts Assessment from:*** a. Habitat disturbance from construction; b. Noise from construction, operations, and potential ORV traffic; c. Increased access for vehicles from road construction or improvements; d. Changes in breeding habitat due to changes in flow levels and flow patterns to breeding ponds; e. Increased traffic from construction and operations; f. Risk of exposure to elevated selenium and salinity levels in evaporative ponds; and g. Increased risk of predation. 3. ***Avoidance and Minimization Measures:*** a. Description of measures that would be implemented to avoid impacts to potential breeding ponds, such as design strategies; protective fencing or other barriers, worker's education, minimizing construction traffic within the vicinity of breeding ponds, and biological monitoring; b. Designation of a Management Area around breeding ponds that includes an appropriate upland buffer, and a description of measures used to minimize impacts within this buffer; and c. Design and operation measures that will bar individuals from entering evaporative ponds. 4. ***Mitigation:*** a. If complete avoidance of the ponds or other breeding sites identified during surveys is not possible, the Protection and Mitigation Plan shall include plans to create additional breeding habitats (ephemeral pond) at least equal in area to the acreage of ponds being impacted. Alternatively, the project owner may purchase mitigation land that has the potential for ponding that is equal to or greater than the ponds identified as potential Toad breeding ponds within the Project Disturbance Area. b. If ponds are to be created, the created ponds shall be capable of holding water for at least nine days during the spadefoot toad breeding season. The created ponds shall be monitored and managed to ensure fulfillment of this performance standard by site visits at the pond following summer rainfall events. If the created ponds fail to achieve this standard, remedial action shall be implemented (for example, by compacting the soil in the pond to increase water-holding capacity). c. If compensation lands are acquired, the project owner shall provide funding for the acquisition in fee title or in easement, initial habitat improvements and long-term maintenance and management of the compensation lands. 5. **Criteria for Mitigation Lands:** If the project owner chooses to mitigate in whole or in part by purchasing habitat: a. The project owner shall purchase habitats in fee title or easement within the known range of the Couch's spadefoot toad. The habitat shall have similar characteristics to those impacted on site including: 1. artificial or natural depressions should be deep enough to have the potential to support the Couch's spadefoot toad; 2. depressions should have potential to pond water for nine days; 3. adjacent uplands should have potential to provide refugia and foraging habitat; and 4. other characteristics that a trained biologist would employ in designating potential habitat for the species. b. If the above criteria are met, these habitats may overlap on other lands preserved by the project owner for other mitigation (e.g., desert tortoise habitat within Northern and Eastern Colorado Desert Coordinated Management) and shall: 1. Provide quality habitat for Couch's spadefoot toad, that has the capacity to regenerate naturally when disturbances are removed; 2. Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible; 3. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;	If the Protection and Mitigation Plan includes creation of ponds, the number and acreage of created ponds shall be described in the plan. No less than 90 days prior to operation of project the project owner shall provide to the CPM as-built drawings and photographs of the created ponds and maps showing the size and location of the ponds in relation to project features. On January 31st of every year following initiation of operation of the project, the project owner shall submit reports to the CPM documenting the capacity of the created ponds to hold water for at least nine days during the spadefoot toad breeding season. If ponds fail to hold water as described above the project owner shall implement remedial actions. The annual reporting may be terminated upon satisfactory demonstration of this performance standard, and with approval of the CPM. If mitigation land is purchased as an alternative to pond creation, the project owner shall provide the CPM and CDFW with an approved form of Security and the calculation of such security in accordance with this Condition of Certification and **BIO-12** no later than 30 days prior to beginning project ground-disturbing activities. Actual Security shall be provided no later than seven days prior to the beginning of project ground-disturbing activities. If Security is provided, the project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities. No less than 90 days prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to the CPM, CDFW and USFWS describing the parcels intended for purchase. The project owner, or an approved third party, shall provide the CPM, CDFW and USFWS with a management plan for the compensation lands and associated funds within 180 days of the land or easement purchase, as determined by the date on the title. The CPM shall review and approve the management plan, in consultation with CDFW. The project owner shall provide written verification to the CPM, and CDFW that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient no later than 18 months from the start of ground-disturbing activities.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
4. Not contain hazardous wastes that cannot be removed to the extent the site is suitable for habitat; 5. Not be subject to property constraints (i.e. mineral leases, cultural resources); and 6. Be on land for which long-term management is feasible. 6. **Security for Implementation of Mitigation:** The project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement the acquisitions and enhancement of Couch's spadefoot toad habitat as described in this Condition. These funds shall be used solely for implementation of the measures associated with the project. Financial assurance can be provided to the CPM and according to the measures outlined in **BIO-12**, and within the time period specified for this assurance (see the verification section at the end of this Condition). The final amount due will be determined by an updated appraisal and a PAR analysis conducted as described in **BIO-12**.				
DF BIO-27: In-Lieu Fee Mitigation Option. The project owner may choose to satisfy its mitigation obligations by paying an in lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099. Alternately, the CPM, in conjunction with the BLM, CDFW, and USFWS, may approve the project owner's use of another mitigation program or any other applicable in-lieu fee provision, provided that the Project's in-lieu fee proposal or mitigation program is found by the CPM to mitigate the impacts identified herein. If the in-lieu fee proposal or mitigation program is found by the CPM, in coordination with the BLM, CDFW, and USFWS to be in compliance, and the Project Owner chooses to satisfy its mitigation obligations through the in-lieu fee or mitigation program, the Project Owner shall provide proof of the in-lieu fee payment to the CPM prior to construction related ground disturbance.	If electing to use this provision, the project owner shall notify the Commission that it would like a determination that the project's in-lieu fee proposal or mitigation program mitigate for the impacts identified herein. Prior to site mobilization and construction related ground disturbance the Project Owner shall provide proof of the in lieu fee payment to the CPM.			
DF BIO-28: Project Construction Phasing Plan. The project owner shall provide compensatory mitigation for the total Project Disturbance Area and may provide such mitigation in four phases as depicted in Figure 2-3 (Project Phasing) in Revised Petition for Amendment dated April 2013, "Project Disturbance Area" encompasses all areas to be temporarily and permanently disturbed by the project including all linear and ancillary facilities, as well as undeveloped areas inside the Project's boundaries that would no longer provide viable long-term habitat. Project construction will occur in phases that generally follow development of the solar units, • Phase 1: Includes Unit 1 and the linear corridor from where the gen-tie leaves Unit 1 south to the Colorado River Substation, and the distribution line • Phase 2: Includes Unit 2 • Phase 3: Includes Unit 3 • Phase 4: Includes Unit 4 and the linear corridor from where the gen-tie leaves Unit 1 to the northern boundary of solar plant site. This portion of the linear corridor would not need to be constructed/disturbed until Unit 4 is constructed. These phases will generally include installation of fencing, clearing, grubbing and grading, and development of common facilities first, followed by the remaining power block units. All construction activities for the non-linear features during these subsequent phases will occur within desert tortoise exclusionary fenced areas that have been cleared in accordance with USFWS protocols. The estimated disturbance area for each project Phase and resource type is provided in **BIO-28 Table 1** below. This table shall be refined prior to the start of each construction phase with the disturbance area adjusted to reflect the final project footprint for each phase. Prior to initiating each phase of construction the project owner shall submit the actual construction schedule, a figure depicting the locations of proposed construction and amount of acres to be disturbed. Mitigation acres are calculated based on the compensation requirements for each resource type as described in the above Conditions of Certification – **BIO-12** (Desert Tortoise), **BIO-20** (Mojave Fringe-toed Lizard), **BIO-18** (Western Burrowing Owl), and **BIO-22** (State Waters). Compensatory mitigation for each phase shall be implemented according to the timing required by each condition. **BIO-28 Table 1. Impacts and Mitigation Required For Each Phase of The Project**	The project owner shall not disturb any area outside of the area that has been approved for that phase of construction and for the previously approved phases of construction. No less than 30 days prior to the start of desert tortoise clearance surveys for each phase, the project owner shall submit a description of the proposed construction activities for that phase to CDFW, USFWS and BLM for review and to the CPM for review and approval. The description for each phase shall include the proposed construction schedule, a figure depicting the locations of proposed construction and amount of acres of each habitat type to be disturbed. No less than 30 days prior to beginning Project ground-disturbing activities for each phase, the project owner shall provide the form of Security in accordance with this Condition of Certification in the amounts described in BIO-28 Table 1. No later than 7 days prior to beginning Project ground-disturbing activities for each phase, the project owner shall provide written verification of the actual Security. The project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities for each phase.			

Phase	Desert Tortoise		MFTL		WBO	
	Impact (acres)	Mitigation (acres)	Impact (acres)	Mitigation (acres)	Impact (individuals/ pairs)	Mitigation (acres)
Phase 1	1,074	1,074	25	76	2	39
Phase 2	942	942	0	0	0	0
Phase 3	1,051	1,051	0	0	0	0
Phase 4	908	908	0	0	0	0
Total	3,975	3,975	25	76	2	39

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Biological Resources (cont.)				
<table><tr><th rowspan="2">Phase</th><th colspan="2">Desert Dry Wash Woodland</th><th colspan="2">Vegetated Ephemeral Swales and Unvegetated Ephemeral Dry Wash</th></tr><tr><th>Impact (acres)</th><th>Mitigation (acres)</th><th>Impact (acres)</th><th>Mitigation (acres)</th></tr><tr><td>Phase 1</td><td>2</td><td>6</td><td>91</td><td>137</td></tr><tr><td>Phase 2</td><td>5</td><td>15</td><td>59</td><td>86</td></tr><tr><td>Phase 3</td><td>0</td><td>0</td><td>5</td><td>8</td></tr><tr><td>Phase 4</td><td>15</td><td>45</td><td>77</td><td>115</td></tr><tr><td>Total</td><td>22</td><td>66</td><td>232</td><td>346</td></tr></table>				
Cultural Resources				
DF CUL-1: Prehistoric Trails Network Cultural Landscape (PTNCL) Documentation and Possible NRHP Nomination. The project owner shall contribute to a special fund set up by the Energy Commission and/or BLM to finance the completion of the PTNCL Documentation and Possible NRHP Nomination program presented in the Blythe Solar Power Plant (BSPP) Revised Staff Assessment RSA). The amount of the contribution shall be $35 per acre that the project encloses or otherwise disturbs. Any additional contingency contribution is not to exceed an amount totaling 20 percent of the original contribution. The contribution to the special fund may be made in installments at the approval of the CPM, with the first installment to constitute one-third of the total original contribution amount. If a project is not certified, or if a project owner does not build the project, or, if for some other reason deemed acceptable by the CPM, a project owner does not participate in funding the PTNCL documentation and possible NRHP nomination program, the other project owner(s) may consult with the CPM to adjust the scale of the PTNCL documentation and possible NRHP nomination program research activities to match available funding. A project owner that funds the PTNCL documentation and possible NRHP nomination program, and then withdraws, will be able to reclaim their monetary contribution, to be refunded on a prorated basis.	No later than 10 days after receiving notice of the successful transfer of funds for any installment to the Energy Commission's and/or BLM's special PTNCL fund, the project owner shall submit a copy of the notice to the Energy Commission's Compliance Project Manager (CPM).			
DF CUL-2: Desert Training Center California-Arizona Maneuver Area Cultural Landscape (DTCCL) Documentation and Possible NRHP Nomination. The project owner shall contribute to a special fund set up by the Energy Commission and/or BLM to finance the completion of the Documentation and Possible NRHP Nomination program presented in the BSPP RSA. The amount of the contribution shall be $25 per acre that the project encloses or otherwise disturbs. Any additional contingency contribution is not to exceed an amount totaling 20 percent of the original contribution. The contribution to the special fund may be made in installments at the approval of the CPM, with the first installment to constitute one-third of the total original contribution amount. If a project is not certified, or if a project owner does not build the project, or, if for some other reason deemed acceptable by the CPM, a project owner does not participate in funding the DTCCL documentation and possible NRHP nomination program, the other project owner(s) may consult with the CPM to adjust the scale of the DTCCL documentation and possible NRHP nomination program research activities to match available funding. A project owner that funds the DTCCL documentation and possible NRHP nomination program, and then withdraws, will be able to reclaim their monetary contribution, to be refunded on a prorated basis.	No later than 10 days after receiving notice of the successful transfer of funds for any installment to the Energy Commission's and/or BLM's special DTCCL fund, the project owner shall submit a copy of the notice to the CPM.			
DF CUL-3: Cultural Resources Personnel. Prior to the start of ground disturbance (includes "preconstruction site mobilization", "ground disturbance," and "construction grading, boring, and trenching," as defined in the General Conditions for this project), the project owner shall obtain the services of a Cultural Resources Specialist (CRS), one or more alternate CRSs, if alternates are needed, and the two technical specialists identified below in this Condition. The CRS shall manage all cultural resources mitigation, monitoring, curation, and reporting activities in accordance with the Conditions of Certification (Conditions). The CRS shall have a primarily administrative and coordinative role for the BSPP. The project owner shall ensure that the CRS implements the cultural resources conditions, providing for data recovery from known historical resources, and shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be impacted in an unanticipated manner. The CRS may obtain the services of field crew members and cultural resources monitors (CRMs), if needed, to assist in mitigation, monitoring, and curation activities. No ground disturbance shall occur prior to CPM approval of the CRS and alternates, unless such activities are	Preferably at least 120 days, but in any event no less than 75 days prior to the start of ground disturbance, the project owner shall submit the resumes for the CRS, the alternate CRS(s) if desired, the PPA, and the PHA to the CPM for review and approval. At least 65 days prior to the start of data recovery on known archaeological sites, the project owner shall confirm in writing to the CPM that the approved CRS, the PPA, and the PHA will be available for on-site work and are prepared to implement the cultural resources Conditions **CUL-6** through **CUL-11**. Rationale: Proposed schedule change is in accordance with the project time-line.			

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		Initials	Date	Remarks
Cultural Resources (cont.)				
specifically approved by the CPM. Approval of a CRS may be denied or revoked for reasons including but not limited to noncompliance on this or other Energy Commission projects. ***Cultural resources specialist.*** The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61. In addition, the CRS shall have the following qualifications: 1. A background in anthropology and prehistoric archaeology; 2. At least 10 years of archaeological resource mitigation and field experience, with at least three of those years in California; and 3. At least three years of experience in a decision-making capacity on cultural resources projects, with at least one of those years in California, and the appropriate training and experience to knowledgably make recommendations regarding the significance of cultural resources. ***Required Cultural Resources Technical Specialists.*** The project owner shall ensure that the CRS obtains the services of a qualified prehistoric archaeologist to conduct the research specified in **CUL-6** and **CUL-7**. The Project Prehistoric Archaeologist's (PPA) training and background must meet the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric archaeology, as published in Title 36, Code of Federal Regulations, part 61, and the resume of the PPA must demonstrate familiarity with similar artifacts and environmental modifications (deliberate and incidental) to those associated with the prehistoric and protohistoric use of the Palo Verde Mesa. The PPA must meet OSHA standards as a "Competent Person" in trench safety. The project owner shall ensure that the CRS obtains the services of a qualified historical archaeologist to conduct the research specified in **CUL-8** through **CUL-11**. The Project Historical Archaeologist's (PHA) training and background must meet the U.S. Secretary of Interior's Professional Qualifications Standards for historical archaeology, as published in Title 36, Code of Federal Regulations, part 61. The resumes of the CRS, alternate CRS, the PPA, and the PHA shall include the names and telephone numbers of contacts familiar with the work of these persons on projects referenced in the resumes and demonstrate to the satisfaction of the CPM that these persons have the appropriate training and experience to undertake the required research. The project owner may name and hire the CRS, alternate CRS, the PPA, and the PHA prior to certification. **Optional specialist backhoe operator.** The project owner shall ensure that the CRS obtains the services of a specialist backhoe operator to conduct the activities specified in **CUL-6**, if needed. This backhoe operator shall have a resume that demonstrates previous experience using a backhoe in coordination with an archaeologist. In addition, the operator shall use a machine with a "stripping bucket" that is sensitive enough to remove even and consistent layers of sediment 5 centimeters thick. ***Field crew members and cultural resources monitors.*** CRMs and field crew members shall have the following qualifications: 1. A B.S. or B.A. degree in anthropology, archaeology, historical archaeology, or a related field, and one year experience monitoring in California; or 2. An A.S. or A.A. degree in anthropology, archaeology, historical archaeology, or a related field, and four years experience monitoring in California; or 3. Enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology, or a related field, and two years of monitoring experience in California.	At least 10 days prior to a termination or release of the CRS, or within 10 days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the proposed new CRS the AFC and all cultural resources documents, field notes, photographs, and other cultural resources materials generated by the project. If no alternate CRS is available to assume the duties of the CRS, a monitor may serve in place of a CRS so that ground disturbance may continue up to a maximum of three days without a CRS. If cultural resources are discovered then ground disturbance will remain halted until there is a CRS or alternate CRS to make a recommendation regarding significance. At least 20 days prior to data recovery on known archaeological sites, the CRS shall provide a letter naming anticipated field crew members for the project and attesting that the identified field crew members meet the minimum qualifications required by this Condition. At least 20 days prior to ground disturbance, the CRS shall provide a letter naming anticipated CRMs for the project and attesting that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition. At least five days prior to additional CRMs beginning on-site duties during the project, the CRS shall provide letters to the CPM identifying the new CRMs and attesting to their qualifications.			
DF CUL-4: Project Documents for Cultural Resources Personnel. Prior to the start of ground disturbance, the project owner shall provide the CRS, the PPA, and the PHA with copies of the AFC, data responses, confidential cultural resources documents, the Revised Staff Assessment (RSA), and the RSA Supplement/Errata, if any, and the 2013 Project Amendment SA for the project. The project owner shall also provide the CRS, the PPA, the PHA, and the CPM with maps and drawings showing the footprints of the power plant, all linear facility routes, all access roads, and all lay down areas. Maps shall include the appropriate USGS quadrangles and maps at an appropriate scale (e.g., 1:2400 or 1" = 200') for plotting cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. Staff shall review map submittals and, in consultation with the CRS, approve those that are appropriate for use in cultural resources planning activities. No ground disturbance shall occur prior to CPM approval of maps and drawings, unless such activities are specifically approved by the CPM. Release of cultural resources information will be pending BLM approval. If construction of the project would proceed in phases, maps and drawings not previously provided shall be provided to the CRS, the PPA, the PHA, and the CPM prior to the start of each phase. Written notice identifying the proposed schedule of each project phase shall be provided to the CRS and CPM. Weekly, until ground disturbance is completed, the project construction manager shall provide to the CRS and CPM a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week. The project owner shall notify the CRS and the CPM of any changes to the scheduling of the construction phases.	Preferably at least 115 days, but in any event no less than 60 days prior to the start of ground disturbance, the project owner shall provide the AFC, data responses, confidential cultural resources documents, the Revised Staff Assessment (RSA), and RSA Supplement/Errata to the CRS, if needed, and to the PPA, and the PHA. The project owner shall also provide the subject maps and drawings to the CRS, PPA, PHA, and CPM. Staff, in consultation with the CRS, PPA, and PHA, will review and approve maps and drawings suitable for cultural resources monitoring and data recovery activities. At least 15 days prior to the start of ground disturbance, if there are changes to any project-related footprint, the project owner shall provide revised maps and drawings for the changes to the CRS, PPA, PHA, and CPM. At least 15 days prior to the start of each phase of a phased project, the project owner shall submit the appropriate maps and drawings, if not previously provided, to the CRS, PPA, PHA, and CPM. Weekly, during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax. Within five days of changing the scheduling of phases of a phased project, the project owner shall provide written notice of the changes to the CRS and CPM.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
DF CUL-5: Cultural Resources Monitoring and Mitigation Plan. Prior to the start of ground disturbance, the project owner shall submit to the CPM for review and approval draft and final versions of a Cultural Resources Monitoring and Mitigation Plan (CRMMP), as prepared by or under the direction of the CRS, with the contributions of the PPA, and the PHA. The CPM shall provide each draft of the CRMMP to affiliated Native American tribal entities[10] for review and comment. Subsequent iterations of the draft CRMMP and the final CRMMP shall evidence consideration of comments received from said tribal entities, where such comments have been received within 30 days for the initial draft and 7 days for each subsequent draft. The authors' name(s) shall appear on the title page of the CRMMP. The CRMMP shall specify the impact mitigation protocols for all known cultural resources and identify general and specific measures to minimize potential impacts to all other cultural resources, including those discovered during construction. Implementation of the CRMMP shall be the responsibility of the CRS and the project owner. Copies of the CRMMP shall reside with the CRS, alternate CRS, the PPA, and the PHA, each CRM, and the project owner's on-site construction manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless such activities are specifically approved by the CPM. Prior to certification, the project owner may have the CRS, alternate CRS, the PPA, and the PHA complete and submit to CEC for review the CRMMP, except for the portions to be contributed by the PTNCL and the DTCCL programs. The CRMMP shall include, but not be limited to, the elements and measures listed below. 1. The following statement shall be included in the Introduction: "Any discussion, summary, or paraphrasing of the Conditions of Certification in this CRMMP is intended as general guidance and as an aid to the user in understanding the Conditions and their implementation. The Conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the conditions in the CRMMP. The Cultural Resources Conditions of Certification from the Commission Decision are contained in Appendix A." 2. The duties of the CRS shall be fully discussed, including coordination duties with respect to the completion of the Prehistoric Trails Network Cultural Landscape (PTNCL) documentation and possible NRHP nomination program and the Desert Training Center California-Arizona Maneuver Area Cultural Landscape (DTCCL) documentation and possible NRHP nomination program, and oversight/management duties with respect to site evaluation, data collection, monitoring, and reporting at both known prehistoric and historic-period archaeological sites and any CRHR-eligible (as determined by the CPM) prehistoric and historic-period archaeological sites discovered during construction. 3. Explicitly takes into account the perspective of affiliated Native American tribal entities with respect to in-situ or onsite reburial, (unless otherwise prohibited) for the disposition of archaeological and ethnographic resources encountered as a result of the application review process and as a result of project construction and operation. 4. A general research design shall be developed that: a. Charts a timeline of all research activities, including those coordinated under the PTNCL and DTCCL documentation and possible NRHP nomination programs; b. Recapitulates the existing paleoenvironmental, prehistoric, ethnohistoric, ethnographic, and historic contexts developed in the PTNCL and DTCCL historic context and adds to these the additional context of the non-military, historic-period occupation and use of the Palo Verde Mesa, to create a comprehensive historic context for the BSPP vicinity; c. Poses archaeological research questions and testable hypotheses specifically applicable to the archaeological resource types known for the Palo Verde Mesa, based on the research questions developed under the PTNCL and DTCCL research and on the archaeological and historical literature pertinent to the Palo Verde Mesa, and taking into account potential data constraints that may occur as the result of in-situ or onsite reburial of resources under subsection 3. above; and d. Clearly articulates why it is in the public interest to address the research questions that it poses. 5. Protocols, reflecting the guidance provided in **CUL-6** through **CUL-11** shall be specified for the data recovery from known prehistoric and historic-period archaeological resource types. 6. Artifact collection, retention/disposal, and curation policies shall be discussed, as related to the research questions formulated in the research design. These policies shall apply to cultural resources materials and documentation resulting from evaluation and data recovery at both known prehistoric and historic-period archaeological sites and any CRHR-eligible (as determined by the CPM) prehistoric and historic-period archaeological sites discovered during construction. A prescriptive treatment plan may be included in the CRMMP for limited data types. 7. The implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the ground-disturbance and post-ground–disturbance analysis phases of the project shall be specified. 8. Person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team shall be identified.	1. Preferably, at least 90 days but in any event no less than 30 days prior to the start of ground disturbance, the project owner shall submit the CRMMP to the CPM for review and approval. The CPM shall facilitate review and comment of the CRMMP with affected Native American tribes. 2. At least 20 days prior to the start of ground disturbance, in a letter to the CPM, the project owner shall agree to pay curation fees for any materials generated or collected as a result of the archaeological investigations (survey, testing, data recovery). 3. At least 30 days prior to the initiation of ground disturbance, the project owner shall provide to the CPM a copy of a letter from a curation facility that meets the standards stated in the California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections, stating the facility's willingness and ability to receive the materials generated by BSPP cultural resources activities and requiring curation. Any agreements concerning curation will be retained and available for audit for the life of the project.			

NOTE: [10] "affiliated Native American tribal entities" means those tribal entities with which Energy Commission staff initiated consultation under the original siting case and under the consideration of all subsequent amendments to the September 2010 Final Decision for the present project. The list of tribal entities can be found on the project's webpage at http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-06C/TN200052_20130729T101117_Blythe_Amendment_CEC_Tribal_Consultation.pdf

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
9. The manner in which Native American observers or monitors will be included, in addition to their roles in the activities required under **CUL-1**. The procedures to be used to select them and their roles and responsibilities shall be described. 10. All impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during ground disturbance, construction, and/or operation shall be described. Any areas where these measures are to be implemented shall be identified. The description shall address how these measures would be implemented prior to the start of ground disturbance and how long they would be needed to protect the resources from project-related impacts. 11. The commitment to record on Department of Parks and Recreation (DPR) 523 forms, to map, and to photograph all encountered cultural resources over 50 years of age shall be stated. In addition, the commitment to curate all archaeological materials retained as a result of the archaeological investigations (survey, testing, data recovery), in accordance with the California State Historical Resources Commission's Guidelines for the Curation of Archaeological Collections, into a retrievable storage collection in a public repository or museum shall be stated. 12. The commitment of the project owner to pay all curation fees for artifacts recovered and for related documentation produced during cultural resources investigations conducted for the project shall be stated. The project owner shall identify a curation facility that could accept cultural resources materials resulting from BSPP cultural resources investigations. 13. The CRS shall attest to having access to equipment and supplies necessary for site mapping, photography, and recovery of all cultural resource materials (that cannot be treated prescriptively) from known CRHR-eligible archaeological sites and from CRHR-eligible sites that are encountered during ground disturbance. 14. A section that clearly and concisely sets out the flows of authority and work products for **CUL-16**, the Construction Monitoring Program, and sets out explicit communication protocols to facilitate the condition's implementation and notification of affiliated tribal entities. 15. A section that clearly and concisely sets out the flows of authority and work products for **CUL-17**, Authority to Halt Construction; Treatment of Discoveries, and sets out explicit communication protocols to facilitate the condition's implementation and notification of affiliated tribal entities. 16. The contents, format, and review and approval process of the final Cultural Resource Report (CRR) shall be described.				
DF CUL-6: Prehistoric Quarries Archaeological District (PQAD) Data Recovery and District Nomination. Prior to the start of ground disturbance, the project owner shall ensure that the CRMMP includes a PQAD evaluation and data recovery plan, to identify buried additional potential contributors to the district by geophysical or mechanical survey, to investigate and establish the relationships among all potential contributors by formulating research questions answerable with data from the contributors, conduct data recovery from a sample of the contributors, and write a report of investigations and possibly CRHR and NRHP nominations as well. The potential contributors include quarry site CA-RIV-3419 and thermal cobble feature SMB-P-434. This site list may be revised only with the agreement of the CRS and the CPM. The CRMMP shall also include a detailed data recovery plan for an isolated potential thermal cobble feature (not included in the PQAD) at multi-component site SMB-M-418. The project owner shall ensure that the CRS and the PPA assess the NRHP and CRHR eligibility of the PQAD district. Additionally, if the PQAD is found to be ineligible for both registers, the thermal cobble features' eligibility as a separate archaeological district consisting of a thermal cobble feature cluster must also be considered. The evaluation and data recovery plan shall also specify in detail the location recordation equipment and methods to be used and describe any anticipated post-processing of the data. The project owner shall then ensure that the CRS, the PPA, the specialist backhoe operator, and archaeological team members implement the plan, with the permission of the BLM. The PQAD evaluation and data recovery plan shall provide, at a minimum, the details of each of the numbered elements below. 1. ***Research Design*** Based on the prehistoric and ethnohistoric contexts developed for the PTNCL under the research program funded through **CUL-1**, Tasks C and D, and the archaeological and ethnohistoric literature pertinent to the Palo Verde Mesa, the research design shall reflect archaeological themes that relate to the identity and the lifeways of Native American groups on the Palo Verde Mesa in the prehistoric and historic periods. The research design shall: a. Verify from the geological literature the Pleistocene age of the pebble terraces; b. Formulate archaeological research questions and testable hypotheses specifically applicable to the individual contributors (for example, hypotheses regarding the function of the thermal cobble features— cooking? lithic heat treatment? or both?) and to the PQAD overall; c. Define data sets needed to answer the formulated research questions; and d. Develop explicit CRHR-eligibility and NRHP-eligibility assessment criteria, correlated with the research questions and specifically referencing the data sets required to answer them, for the PQAD and for the thermal cobble features as a separate potential archaeological district.	1. At least 15 days prior to the start of BSPP construction-related ground disturbance in the linear facilities corridor impacting site CA-RIV-3419, the project owner shall notify the CPM that the field recordation of the impacted southwestern portion of the site has ensued. 2. At least 90 days prior to the onset of BSPP construction-related ground disturbance in Unit 1 east of Historic Road SMB-H-601, the project owner shall ensure that the PPA completes the geophysical test and that the CRS and PPA consult with the CPM, via telephone, to arrive at an agreement on the reliability of the use of magnetometry to locate buried PQAD thermal cobble features and how to proceed with the subsurface survey. The approved survey shall be conducted. The project owner shall also submit, for the review and approval of the CPM, the precise geographic coordinates of the provisional boundary of the PQAD and a stratified random sample for a broader magnetometry survey of 10 percent of the PQAD within the project boundaries (maximum two acres) or a stratified random sample for a mechanical subsurface survey of 2.5 percent of the PQAD located inside the project's boundaries. 3. At least 60 days prior to the onset of BSPP construction-related ground disturbance in Unit 3 east of Historic Road SMB-H-601, the project owner shall ensure that the PPA completes the preliminary report on the formal inventory of the PQAD prepared by or under the direction of the CRS. The project owner shall ensure that the preliminary report is a concise document that provides descriptions of the schedule and methods of the inventory field effort, a preliminary tally of the numbers and, where feasible, the types of archaeological deposits that were found, a discussion of the potential range of error in that tally, and a map of the locations of the found archaeological deposits that has topographic contours and the project site landform designations as overlays. The results of the formal inventory, as set out in the preliminary report, shall be the basis for the refinement of the provisional district boundary. 4. At least 30 days prior to the start of BSPP construction-related ground disturbance in Unit 3 east of Historic Road SMB-H-601, the project owner shall notify the CPM that the CRS has initiated the data recovery phases of the data recovery program. 5. At least 30 days prior to the start of ground disturbance within 30 meters of the site boundaries of the three isolated thermal cobble features, the project owner shall notify the CPM that the CRS has initiated data recovery on the three isolated thermal cobble features.			

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Cultural Resources (cont.)				
2. ***Program for Evaluation, Data Recovery, and Possible Nomination*** The data recovery program shall: a. Explain how the data sets that are anticipated for the PQAD will contribute to knowledge of the prehistoric and historic-period Native American themes of the research design and answer particular research questions; b. Set out the purposes and methods of the several field phases of the PQAD evaluation and data recovery program (Geophysical Test, Geophysical Survey/Mechanical Survey, Evaluation and Data Recovery); c. Set out the purposes and methods of the concomitant material analyses; and d. Describe the required reports of investigations, the resource registrations (if appropriate), and the process of producing them. 3. ***PQAD Arbitrary Provisional Boundary Definition*** The CRS, PPA, and CPM shall derive and agree upon, in consultation, the precise location of an arbitrary provisional PQAD boundary on the surface of the plant site and in the vicinity of the linear facilities corridor. 4. ***Evaluation and Data Recovery Methodology*** a. *Quarries*: The protocol for the quarry sites simultaneously recovers data from the parts of the quarry site, CA-RIV-3419, the project would impact and allows an assessment of the significance of the impacts of the project to the quarry site and an assessment of the validity of the PQAD concept. i. Conduct a 100 percent pedestrian survey of the parts of the quarry sites that the project activities would disturb; ii. Map and field-record finished tools, diagnostic artifacts, ceramics, artifact concentrations and features (and the material types of each) within the impacted portions of the quarry sites. Identify and quantify artifacts within a sample of no more than 1 percent of the impacted portions of the quarry sites using 2 by 2 meter surface units. Record any differential distribution of artifacts (with suggested explanations for the distribution), and assess the integrity of the site, providing evidence on which that opinion is based; iii Collect for dating and source analyses any obsidian artifacts; iv. With the approval of BLM, conduct a survey of a one percent sample of randomly selected 10 x 10- meter units on the unimpacted portions of the quarry sites; v. Gather the same data in the same way as for the impacted parts of the quarry sites; vi. Compare these data to those gathered in the project-impacted parts of the sites vii. With approval of BLM, conduct a sample survey of a zone 150 meters wide totaling one-half the length of the northwest boundary of CA-RIV-3419. viii. Draw conclusions from the collected data on whether the parts of the quarry sites that would be destroyed by the project contribute significantly to the CRHR- and NRHP eligibility of the sites; ix. Draw conclusions from the collected data, if possible, on whether the merging of the quarries and the lithic scatter in a district is valid. x. Draw conclusions from the collected data, if possible, on whether the merging of the quarries and the thermal cobble features in a district is valid. b. *Thermal Cobble Features* The protocol for the thermal cobble features shall include Phase I identification of possible additional subsurface contributors and compressed Phase II-Phase III evaluation and data recovery from a sample of intact sites or from all of the surface sites, whether intact or not. Phase I is geophysical and/or mechanical testing to determine the horizontal and vertical extent of the distribution of the thermal cobble features, to identify any buried intact examples of thermal cobble features out 100 meters, within the area subject to project impacts, from all surface examples, and to determine if morphological differences are present among the thermal cobble features. Phase II-Phase III (evaluation and data recovery) would reflect judgment that features only present on the surface would be register ineligible and the existing recordation, updated to reflect the test excavation, and would be adequate data recovery. Features with subsurface deposits would be register eligible, and data recovery would ensue. c. *Geophysical Test for Subsurface PQAD Contributing Thermal Cobble Features:* i. Test, in a one-acre parcel within 30 meters of known thermal cobble features, the efficacy of the use of magnetometry to locate buried examples of thermal cobble features; ii. Ground-truth by hand or mechanical excavation a minimum 25 percent sample (but no more than five individual anomalies) of the anomalies identified in the test survey;	6. No longer than 90 days after the end of all construction-related ground disturbance, the project owner shall ensure that the CRS completes the preparation of the National Register of Historic Places and the California Register of Historical Resources nominations for the PQAD and submits the nominations to the State Historic Resources Commission for formal consideration. 7. No longer than 90 days after the end of all construction-related ground disturbance, the project owner shall ensure that the CRS completes the professional paper and provides the CPM with three copies of the final product of that effort, and prepares, and submits for the approval of the CPM, a public outreach product. Upon the CPM's approval of the latter product, the project owner shall ensure, as appropriate, the product's installation, implementation, or display. 8. No longer than 90 days after the end of all construction-related ground disturbance, the project owner shall ensure that the CRS completes the requisite material analyses and prepares and submits, for the approval of the CPM, the final cultural resources report for the Blythe cultural resources data recovery and monitoring activities. The final report shall provide descriptions of the schedule and methods of the data recovery effort, technical descriptions of excavated archaeological features and buried land surfaces that present the highest resolution of technical data that can be derived from the data recovery field notes, plan and, as appropriate, profile drawings and photographs of excavated archaeological features and buried land surfaces, and technical descriptions and appropriate graphics of the stratigraphic contexts of excavated archaeological features and buried land surfaces.			

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		Initials	Date	Remarks
Cultural Resources (cont.)				
iii. Keep field notes and the forms for the survey areas sufficient to completely document the geophysical test; iv. Inform the CPM of the results of the magnetometry survey and groundtruthing and consult on the efficacy of continuing this survey method; d. *Geophysical Survey for Subsurface PQAD Contributing Thermal Cobble Features:* If the CRS and CPM agree, after *consultation*, that the geophysical test demonstrates that the use of magnetometry appears to be reasonably effective in locating buried thermal cobble features, the project owner shall ensure that the PPA proceeds to a broader magnetometry survey of a sample of the area within the PQAD provisional district boundary. The PPA shall: i. Develop a single stratified random sample for the PQAD that would result in a magnetometry survey of a minimum of 10 percent (a maximum of two acres) of the total district area on the plant site; ii. Use criteria to derive the sample that the CRS, the PPA, and the CPM shall agree upon and that reflect the spatial variability in the physical material character and in the chronology of the PQAD, as such variability is presently known from the field investigations; iii. Ground-truth by hand or mechanical excavation the lesser of 10 percent or 10 individual anomalies of those identified in the test survey; iv. Inform the CPM of the results of the survey; v. Keep field notes and the forms for the survey are sufficient to completely document the geophysical survey; e. *Mechanical Survey for Subsurface PQAD Contributing Thermal Cobble Features:* If the CRS and CPM agree, after consultation, that the geophysical test demonstrates that the use of magnetometry appears to be ineffective in locating buried thermal cobble features, the project owner shall ensure that the PPA submits, for CPM review and approval, the CRS's and PPA's plan and methods for a mechanical subsurface survey of the PQAD, using construction equipment, such as a road grader or a backhoe that can work in 5-centimeter lifts. The plan and methods shall include: i. Use of transects, the proposed width and length of which the CPM would approve ii. Removal of thin (no thicker than approximately 5 centimeters) layers to carefully expose target archaeological deposits iii. Survey of a minimum of 2.5 percent of the total PQAD area on the plant site; iv. Use criteria to derive the sample that the CRS, the PPA, and the CPM shall agree upon and that reflect the spatial variability in the physical and material character and in the chronology of the PQAD, as such variability is presently known from the field investigations; v. Preservation of found archaeological deposits until the conclusion of the survey to facilitate the formulation of a representative data recovery sample; vi. Consideration of the PPA recovering a sample of the buried land surfaces that may surround individual features or groups of features and documenting the material culture assemblages that may be found on such surfaces; vii. Verbal report to the CPM on the results of the survey; viii. Retention of field notes and the forms for the survey areas sufficient to completely document the mechanical survey. f. *Data Recovery from Thermal Cobble Features:* Data shall be recovered from impacted thermal cobble features. The purpose of this documentation would be to describe the physical variability of the features, to identify and inventory the artifacts and ecofacts that are found in them, and to interpret the methods of construction and the potential uses of the features. The procedures below shall be used for data recovery at SMB-P-434 and the potential thermal cobble feature at multi-component site SMB-M-418. Data recovery activities shall include: i. Excavation would entail small (approximately 1–3 meters square) areal exposures by hand, where feasible, to remove the archaeological deposits in anthropogenic layers, if present; ii. Retention of samples of each layer sufficient to submit for radiocarbon assays, and macrobotanical, palynological, geochemical, or other analyses; iii. Screening of the balance of each layer through hardware cloth of no greater than 1/8-inch mesh; iv. Recordation of these small exposures in drawings and photographs; v. Retention of field notes and the forms for the excavated features sufficient to acquire the complete complement of data necessary for the description of each feature and the interpretation of the construction and use of each feature to the satisfaction of the CPM; vi. Completions by PPA or CRS and submission by project owner to CPM and BLM of draft DPR 523C site forms for sites where data recovery completed.				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
g. *Data Recovery from Former Land Surfaces Surrounding Thermal Cobble Features:* Data shall be recovered from a sample of buried land surfaces assumed to be adjacent to buried thermal cobble features, if any, identified during the geophysical or mechanical subsurface survey, to document the material culture assemblages and other evidence of behavior that may be found on such surfaces. The project owner shall ensure that the PPA: i. Develops, in consultation with the CRS and the CPM a sample of the potential buried surfaces, if any, that would be subject to excavation; ii. Uses criteria to derive the sample that the CRS, the PPA, and the CPM shall agree upon and that reflect the spatial variability in the physical and material character and in the chronology of the PQAD, as such variability is presently known from the field investigations; iii. Excavates by hand three large (three meters square) block exposures, iv. Successfully recovers data from at least four block exposures, but must make no more than eight attempts to find buried surfaces around thermal cobble features. v. Removes the archaeological deposits from the top of the surface in anthropogenic layers, if present. Excavates each block exposure as a single excavation unit rather than as nine separate, one-meter-square excavation units; the PPA may excavate three continuous, 1-metersquare excavation units together across the center of the feature to assess the presence of a surface and then excavate the other six units if a surface is present; vi. Retains samples of each layer sufficient to submit for radiocarbon assays, and macrobotanical, palynological, geochemical, or other analyses; vii. Screens the balance of each layer through hardware cloth of no greater than 1/8-inch mesh; viii. Keeps field notes and the forms for the excavated features sufficient to acquire the complete complement of data necessary for the description of the distributions of artifacts and ecofacts across each surface, and the interpretation of the use of each surface, to the satisfaction of the CPM; 5. ***Materials Analyses*** The project owner shall ensure that the PQAD evaluation and data recovery plan articulates the anticipated scope of the analyses of the artifact and ecofact collections that cumulatively result from the investigations of the PQAD, articulates the analytic methods to be used, and articulates how the data sets that such analyses will produce are relevant to the themes and questions in the research design for the PQAD. 6. ***Report of Investigations*** The project owner shall ensure that the PQAD evaluation and data recovery plan states that a final report for the PQAD evaluation and data recovery plan Data Recovery Program is required and describes the content, production schedule, and approval process for the report. 7. ***Provision of Results to the PTNCL PI*** The project owner shall ensure that the CRS provides the data and results of the PQAD evaluation and data recovery plan Data Recovery Program to the PTNCL PI for incorporation into the PTNCL NRHP nomination. 8. ***California Register of Historical Resources (CRHR) and National Register of Historic Places (NRHP) Registrations if appropriate*** The project owner shall ensure that the PPA prepares a CRHR nomination and a NRHP nomination for the PQAD, including both the contributors located within the boundaries of the BSPP and such contributors, entire and partial, located beyond the boundaries of the BSPP, as are known or posited. The nominations should be the PPA's best estimate of a boundary for the district, a boundary that the PPA shall derive on the basis of the results of the PQAD evaluation and data recovery program and present in the final report for that program. The project owner shall ensure that the CRS: a. submits the CRHR nomination to the State Historical Resources Commission for formal consideration of CRHR eligibility, b. submits the NRHP nomination to the State Historical Resources Commission to initiate the process of formal consideration by the Keeper of the National Register, and c. tracks and facilitates the review of both nominations to acceptance or rejection. 9. ***Outreach Initiatives If PQAD is not Eligible*** a. Professional Outreach. The project owner shall ensure that the CRS and/or PPA prepare a research paper and present it at a professional conference, to inform the professional archaeological community about the PQAD and to interpret its implications for our understanding of the prehistory and early history of Native American life in the region. b. Public Outreach. The project owner shall prepare and present materials that Interpret the PQAD for the public. Project owner shall propose at least one outreach project, examples may include one-time preparation of an instructional module or one-time preparation of a public interpretation brochure.				

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
DF CUL-7: Data Recovery For Small Prehistoric Sites (Lithic Scatters, Cairns, and Pot Drops). The project owner shall ensure the CRMMP includes a data recovery plan for the resource type "small prehistoric sites," consisting of sites SMB-M-214, SMB-H-234, SMB-H-CT-001, and SMB-H-WG-102. This site list may be revised only with the agreement of the CRS and the CPM. The data recovery plan shall include use of the CARIDAP protocol on qualifying sites, how to proceed if features or other buried deposits are encountered, and the materials analyses and laboratory artifact analyses that will be used. The plan shall also specify in detail the location, recordation equipment and methods used and describe any post-processing of the data. Prior to the start of ground disturbance within 30 meters of the sites boundaries of each of these sites, the project owner shall then ensure that the CRS, the PPA, and/or archaeological team members implement the plan, if allowed by the BLM, which, for sites where CARIDAP does not apply, shall include, but is not limited to the following tasks: 1. Use location recordation equipment that has the latest technology with sub-meter accuracy (such as UTM 11 North or California Teale Albers) to add to the original site maps the following features: seasonal drainages, site boundaries, location of each individual artifact, and the boundaries around individual artifact concentrations; 2. Request the PTNCL geoarchaeologist, or equivalent qualified person approved by the CPM and hired by the project owner should the PTNCL geoarchaeologist not be available, to identify the specific landform for each site; 3. Map and field-record all lithic artifacts (numbers of flakes, the reduction sequence stage each represents, cores, tool blanks, finished tools, hammerstones, and concentrations, and the material types of each) and the other types of prehistoric artifacts present 4. Map any differential distribution of artifacts and suggest explanations for the distribution 5. Assess the integrity of the site and provide the evidence substantiating that assessment; 6. Collect for dating and source analyses any obsidian artifacts; 7. Field record the surface location of all other artifacts and collect all ceramic artifacts and botanical and faunal remains for laboratory analysis and curation; 8. Surface scrape to a depth of 5 centimeters a 5-meter-by-5-meter area centered on the artifact concentration, field-record the lithic artifacts as to location, material type, and the reduction sequence stage each represents, record the location of all other artifacts, and retain the obsidian and ceramic artifacts and botanical and faunal remains for laboratory analysis and curation; 9. Excavate one 1-meter-by-1-meter unit in 10-centimeter levels until the unit reaches a depth of 20 centimeters below any anthropogenic materials, placing the unit in the part of the site with the highest artifact density and recording its locations on the site map; 10. Place one 1-meter-by-1-meter excavation unit, as described above, in the center of each concentration if multiple artifact concentrations have been identified; 11. Notify the CPM by telephone or e-mail that subsurface deposits were or were not encountered and make a recommendation on the site's CRHR eligibility; 12. If no subsurface deposits were encountered, and the CPM agrees the site is not eligible for the CRHR, data recovery is complete; 13. If subsurface deposits are encountered, test the horizontal limits of the site by excavating additional 1-meter-by-1-meter excavation units in 10-centimeter levels until the unit reaches a depth of 20 centimeters below any anthropogenic materials, using a shovel or hand auger, or other similar technique, at four spots equally spread around the exterior edge of each site, recording the locations of these units on the site map; 14. Sample the encountered features or deposits, using the methods described in the CRMMP, record their locations on the site map, retain samples, such as flotation, pollen, and charcoal, for analysis, and retain all artifacts for professionally appropriate laboratory analyses and curation, until data recovery is complete; 15. Present the results of the **CUL-7** data recovery in a letter report by the PPA or CRS, which shall serve as a preliminary report. Letter reports may address one site, or multiple sites depending on the needs of the CRS. The letter report shall be a concise document the provides description of the schedule and methods used in the field effort, a preliminary tally of the numbers and types of features and deposits that were found, a discussion of the potential range of error for that tally, a map showing the location of excavation units including topographic contours and the site landforms, and a discussion of the CRHR eligibility of each site and the justification for that determination; 16. Update the existing Department of Parks and Recreation (DPR) 523 site form for these sites, including new data on seasonal drainages, site boundaries, location of each individual artifact, the boundaries around individual artifact concentrations, the landform, and the eligibility determination; and 17. Present the final results of data recovery at these prehistoric sites in the CRR, as described in **CUL-18**.	At least 15 days prior to ground disturbance, the project owner shall notify the CPM that data recovery for small sites has ensued. After the completion of the excavation of the first 1-meter-by-1-meter excavation unit at each of the subject sites, the CRS shall notify the CPM regarding the presence or absence of subsurface deposits and shall make a recommendation on the site's CRHR eligibility. Within one week of the completion of data recovery at a site, the project owner shall submit a letter report written by the PPA or CRS for review and approval of the CPM. When the CPM approves the letter report, ground disturbance may begin at this site location.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
DF CUL-8: Data Recovery on Historic-Period Sites With Features. The project owner shall ensure the CRMMP includes a data recovery plan for the resource type "historic-period archaeological sites with features," consisting of sites SMB-H-143, SMB-H-411, SMB-H-416, and SMB-H-419. This site list may be revised only with the agreement of the CRS and the CPM. The data recovery plan shall include how to proceed if features or other buried deposits are encountered and the materials analyses and laboratory artifact analyses that will be used. The plan shall also specify in detail the location, recordation equipment and methods to be used and describe any anticipated post processing of the data. Prior to the start of ground disturbance within 30 meters of the sites boundaries of each of these sites, the project owner shall then ensure that the CRS, the PPA, and/or archaeological team members implement the plan, if allowed by the BLM, which shall include, but is not limited to the following tasks: 1. The project owner shall hire a PHA with the qualifications described in **CUL-3** to supervise the field work. 2. The project owner shall, ensure that, prior to beginning the field work, the PHA and crew chief are trained by the DTCCL Historical Archaeologist, or equivalent qualified person approved by the CPM and hired by the project owner should the DTCCL Historical Archaeologist not be available, in the identification, analysis and interpretation of the artifacts, environmental modifications, and trash disposal patterns associated with the early phases of WWII land-based U.S. army activities, as researched and detailed by the DTCCL PI-Historian and the DTCCL Historical Archaeologist. 3. The project owner shall ensure that, prior to beginning the field work, the field crew members are trained in the consistent and accurate identification of the full range of late nineteenth and early-to-mid-twentieth century can, bottle, and ceramic diagnostic traits. 4. The project owner shall ensure that the original site map shall be updated to include at minimum: landform features such as small drainages, any man-made features, the limits of any artifact concentrations and features (previously known and newly found in the metal detector survey), using location recordation equipment that has the latest technology with submeter accuracy (such as UTM 11 North or California Teale Albers). 5. The project owner shall ensure that a detailed in-field analysis of all artifacts shall be completed, if not done previously. Types of seams and closures for each bottle and all cans shall be documented. Photographs shall be taken of any text or designs. Unusual or unidentifiable artifacts may be collected for further analysis, but otherwise artifacts shall not be collected. 6. The project owner shall ensure a systematic metal detector survey is completed at each site, and that each hit is investigated. All artifacts and features thus found must be mapped, measured, photographed, and fully described in writing. 7. The project owner shall ensure that all features are recorded, and that any features having subsurface elements are excavated by a qualified historical archaeologist. All features and contents must be mapped, measured, photographed, and fully described in writing. 8. The project owner shall ensure that the details of what is found at each site shall be presented in a letter report from the CRS or PHA which shall serve as a preliminary report, that details what was found at each site, as follows: a. Letter reports may address one site, or multiple sites depending on the needs of the CRS; and b. The letter report shall be a concise document that provides a description of the schedule and methods used in the field effort, a preliminary tally of the numbers and types of features and deposits that were found, a discussion of the potential range of error for that tally, and a map showing the location of collection and/or excavation units, including topographic contours and the site landforms. 9. The project owner shall ensure that the data collected from the field work shall be provided to the DTCCL Historical Archaeologist to assist in the determination of which, if any, of the 12 historic-period sites are contributing elements to the DTCCL. 10. The project owner shall ensure that the PHA analyzes all recovered data and writes or supervises the writing of a comprehensive final report. This report shall be included in the CRR (**CUL-1**8). Relevant portions of the information gathered shall be included in the possible NRHP nomination for the DTCCL (funded by **CUL-2**).	At least 15 days prior to ground disturbance, the project owner shall notify the CPM that mapping and in-field artifact analysis has ensued on historic-period sites with features. Within one week of completing data recovery at a site, the project owner shall submit to the CPM for review and approval a letter report written by the CRS, evidencing that the field portion of data recovery at each site has been completed. When the CPM approves the letter report, ground disturbance may begin at the site location(s) that are the subject of the letter report.			
DF CUL-9: Data Recovery on Historic-Period Sites With Structures. The project owner shall ensure the CRMMP includes a data recovery plan for the resource type "historic-period archaeological sites with structures," consisting of site SMB-H-404. This site list may be revised only with the agreement of the CRS and the CPM. The data recovery plan shall include how to proceed if features or other buried deposits are encountered and the materials analyses and laboratory artifact analyses that will be used. The plan shall also specify in detail the location, recordation equipment and methods to be used and describe any anticipated post-processing of the data. Prior to the start of ground disturbance within 30 meters of the sites boundaries of each of these sites, the project owner shall then ensure that the CRS, the PPA, and/or archaeological team members implement the plan, if allowed by the BLM, which shall include, but is not limited to the following tasks: 1. The project owner shall hire a qualified historian to research the locations of these sites and attempt to determine their origins and functions from the historical record.	At least 15 days prior to ground disturbance, the project owner shall notify the CPM that mapping and in-field artifact analysis has ensued on historic-period sites with structures. Within one week of completing data recovery at a site, the project owner shall submit to the CPM for review and approval a letter report written by the CRS, evidencing that the field portion of data recovery at each site has been completed. When the CPM approves the letter report, ground disturbance may begin at the site location(s) that are the subject of the letter report.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
2. The project owner shall hire a PHA with the qualifications described in **CUL-3** to supervise the field work. 3. The project owner shall, ensure that, prior to beginning the field work, the PHA and crew chief are trained by the DTCCL Historical Archaeologist, or equivalent qualified person approved by the CPM and hired by the project owner should the DTCCL Historical Archaeologist not be available, in the identification, analysis and interpretation of the artifacts, environmental modifications, and trash disposal patterns associated with the early phases of WWII land-based U.S. army activities, as researched and detailed by the DTCCL PI-Historian and the DTCCL Historical Archaeologist. 4. The project owner shall ensure that, prior to beginning the field work, the field crew members are trained in the consistent and accurate identification of the full range of late nineteenth and early-to-mid-twentieth-century can, bottle, and ceramic diagnostic traits. 5. The project owner shall ensure that the original site map shall be updated to include at minimum: landform features such as small drainages, any manmade features, the limits of any artifact concentrations and features (previously known and newly found in the metal detector survey), using location recordation equipment that has the latest technology with sub-meter accuracy (such as UTM 11 North or California Teale Albers). 6. The project owner shall ensure that a detailed in-field analysis of all artifacts shall be completed, if not done previously. Types of seams and closures for each bottle and all cans shall be documented. Photographs shall be taken of any text or designs. Unusual or unidentifiable artifacts may be collected for further analysis, but otherwise artifacts shall not be collected. 7. The project owner shall ensure a systematic metal detector survey is completed at each site, and that each “hit” is investigated. All artifacts and features thus found must be mapped, measured, photographed, and fully described in writing. 8. The project owner shall ensure that all structures are mapped, measured, photographed, and fully described in writing, and that all associated features having subsurface elements are excavated by a qualified historical archaeologist. All features and contents must be mapped, measured, photographed, and fully described in writing. 9. The project owner shall ensure that the details of what is found at each site shall be presented in a letter report from the CRS or PHA which shall serve as a preliminary report, that details what was found at each site, as follows: a. Letter reports may address one site, or multiple sites depending on the needs of the CRS; and b. The letter report shall be a concise document the provides a description of the schedule and methods used in the field effort, a preliminary tally of the numbers and types of features and deposits that were found, a discussion of the potential range of error for that tally, and a map showing the location of collection and/or excavation units, including topographic contours and the site landforms. 10. The project owner shall ensure that the data collected from the field work shall be provided to the DTCCL Historical Archaeologist to assist in the determination of which, if any, of the three historic-period sites are contributing elements to the DTCCL. 11. The project owner shall ensure that the PHA analyzes all recovered data and writes or supervises the writing of a comprehensive final report. This report shall be included in the CRR (**CUL-18**). Relevant portions of the information gathered shall be included in the possible NRHP nomination for the DTCCL (funded by **CUL-2**).				
DF CUL-10: Data Recovery on Historic-Period Dump Sites. The project owner shall ensure the CRMMP includes a data recovery plan for the resource type “historic-period dump sites,” consisting of sites SMB-H-171, SMB-H-178, SMB-H- 403, and SMB-H-427 on the proposed plant site and SMB-H-522/525 along the linear facilities corridor if impacts to the latter cannot be avoided by spanning. This site list may be revised only with the agreement of the CRS and the CPM. The data recovery plan shall include how to proceed if features or other buried deposits are encountered, and the materials analyses and laboratory artifact analyses that will be used. The plan shall also specify in detail the location recordation equipment and methods to be used and describe any anticipated post-processing of the data. Prior to the start of ground disturbance within 30 meters of the sites boundaries of each of these sites, the project owner shall then ensure that the CRS, the PPA, and/or archaeological team members implement the plan, if allowed by the BLM, which shall include, but is not limited to the following tasks: 1. The project owner shall hire a PHA with the qualifications described in **CUL-3** to supervise the field work. 2. The project owner shall, ensure that, prior to beginning the field work, the PHA and crew chief are trained by the DTCCL Historical Archaeologist, or equivalent qualified person approved by the CPM and hired by the project owner should the DTCCL Historical Archaeologist not be available, in the identification, analysis and interpretation of the artifacts, environmental modifications, and trash disposal patterns associated with the early phases of WWII land-based U.S. army activities, as researched and detailed by the DTCCL PI-Historian and the DTCCL Historical Archaeologist. 3. The project owner shall ensure that, prior to beginning the field work, the field crew members are trained in the consistent and accurate identification of the full range of late nineteenth and early-to-mid-twentieth-century can, bottle, and ceramic diagnostic traits.	At least 15 days prior to ground disturbance, the project owner shall notify the CPM that mapping and in-field artifact analysis has ensued on historic-period dump sites. Within one week of completing data recovery at a site, the project owner shall submit to the CPM for review and approval a letter report written by the CRS, evidencing that the field portion of data recovery at each site has been completed. When the CPM approves the letter report, ground disturbance may begin at the site location(s) that are the subject of the letter report.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
4. The project owner shall ensure that the original site map shall be updated to include at minimum: landform features such as small drainages, any manmade features, the limits of any artifact concentrations and features, using location recordation equipment that has the latest technology with sub-meter accuracy (such as UTM 11 North or California Teale Albers). 5. The project owner shall ensure that each dump is entirely mapped, measured, photographed, and fully described in writing. 6. The project owner shall ensure that 10 percent of the surface contents of each dump is recorded as follows: a. Apply a 1-meter x 1-meter grid to the entire dump and randomly select 10 percent of the units. b. Do a detailed in-field analysis of all artifacts in each unit, documenting the measurements and the types of seams and closures for each bottle, and the measurements, seams, closure, and opening method for all cans. Photographs shall be taken of maker's marks on bottles, any text or designs on bottles and cans, and of decorative patterns and maker's marks on ceramics. Unusual or unidentifiable artifacts may be collected for further analysis, but otherwise artifacts shall not be collected. c. If any subsurface elements are found in the units, a qualified historical archaeologist shall excavate the part in the unit. All features and contents must be mapped, measured, photographed, and fully described in writing. 7. The project owner shall ensure that the details of what is found at each site shall be presented in a letter report from the CRS or PHA which shall serve as a preliminary report, that details what was found at each site, as follows: a. Letter reports may address one site, or multiple sites depending on the needs of the CRS; and b. The letter report shall be a concise document the provides a description of the schedule and methods used in the field effort, a preliminary tally of the numbers and types of features and deposits that were found, and a map showing the location of collection and/or excavation units, including topographic contours and the site landforms. c. The letter report for each site shall present preliminary conclusions regarding the period(s) of use of the dump and suggest who the possible users were in each represented period. 8. The project owner shall ensure that the data collected from the field work shall be provided to the DTCCL Historical Archaeologist to assist in the determination of which, if any, of the five historic-period dump sites are contributing elements to the DTCCL. 9. The project owner shall ensure that the PHA analyzes all recovered data and writes or supervises the writing of a comprehensive final report. This report shall be included in the CRR (**CUL-1**8). Relevant portions of the information gathered shall be included in the possible NRHP nomination for the DTCCL (funded by **CUL-2**).				
DF CUL-11: Data Recovery on Historic-Period Refuse Sites. The project owner shall ensure the CRMMP includes a data recovery plan for the resource type "historic-period refuse sites," consisting of sites SMB-H-164, SMB-H-166, SMB-H¬287, SMB-H-288, and SMB-H-423. The focus of the recordation upgrade is to determine if these sites can be attributed to the DTC/C-AMA use of the region and are therefore contributors to the DTCCL. This site list may be revised only with the agreement of the CRS and the CPM. The data recovery plan shall include how to proceed if features or other buried deposits are encountered and the materials analyses and laboratory artifact analyses that will be used. The plan shall also specify in detail the location recordation equipment and methods to be used and describe any anticipated post-processing of the data. Prior to the start of ground disturbance within 30 meters of the sites boundaries of each of these sites, the project owner shall then ensure that the CRS, the PPA, and/or archaeological team members implement the plan, if allowed by the BLM, which shall include, but is not limited to the following tasks: 1. The project owner shall hire a PHA with the qualifications described in **CUL-3** to supervise the fieldwork. 2. The project owner shall, ensure that, prior to beginning the field work, the PHA and crew chief are trained by the DTCCL Historical Archaeologist, or equivalent qualified person approved by the CPM and hired by the project owner should the DTCCL Historical Archaeologist not be available, in the identification, analysis and interpretation of the artifacts, environmental modifications, and trash disposal patterns associated with the early phases of WWII land-based U.S. army activities, as researched and detailed by the DTCCL PI-Historian and the DTCCL Historical Archaeologist. 3. The project owner shall ensure that, prior to beginning the field work, the field crew members are trained in the consistent and accurate identification of the full range of late nineteenth and early-to-mid-twentieth century can, bottle, and ceramic diagnostic traits. 4. The project owner shall ensure that the original site map shall be updated to include at minimum: landform features such as small drainages, any man-made features, the limits of any artifact concentrations and features (previously known and newly found in the metal detector survey), using location recordation equipment that has the latest technology with submeter accuracy (such as UTM 11 North or California Teale Albers). 5. The project owner shall ensure that a detailed in-field analysis of all artifacts types shall be completed, documenting the measurements and the types of seams and closures for each bottle, and the measurements, seams, closure, and opening method for all cans. Photographs shall be taken of maker's marks on bottles, any text or designs on bottles and cans, and of decorative patterns and maker's marks on ceramics. Artifacts shall not be collected.	At least 15 days prior to ground disturbance, the project owner shall notify the CPM that mapping and upgraded in-field artifact analysis has ensued on six historic-period refuse scatter sites. Within one week of completing data recovery at a site, the project owner shall submit to the CPM for review and approval a letter report written by the CRS, evidencing that the field portion of data recovery at each site has been completed. When the CPM approves the letter report, ground disturbance may begin at the site location(s) that are the subject of the letter report.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
6. The project owner shall ensure that the details of what is found at each site shall be presented in a letter report from the CRS or PHA, which shall serve as a preliminary report, that details what was found at each site, as follows: a. Letter reports may address one site, or multiple sites depending on the needs of the CRS; and b. The letter report shall be a concise document the provides a description of the schedule and methods used in the field effort, a preliminary tally of the numbers and types of features and deposits that were found, a discussion of the potential range of error for that tally, and a map showing the location of collection and/or excavation units, including topographic contours and the site landforms. c. The letter report shall make a recommendation on whether each site is a contributor to the DTTCL. 7. The project owner shall ensure that the data collected from the fieldwork shall be provided to the DTCCL Historical Archaeologist to assist in the determination of which, if any, of the six historic-period sites are contributing elements to the DTCCL. 8. The project owner shall ensure that the PHA analyzes all recovered data and writes or supervises the writing of a comprehensive final report. This report shall be included in the CRR (**CUL-18**). Relevant portions of the information gathered shall be included in the possible NRHP nomination for the DTCCL (funded by **CUL-2**).				
DF CUL-12: Data Recovery On Historic-Period Roads. The project owner shall ensure that a qualified architectural historian (must meet the U.S. Secretary of the Interior's Professional Qualifications Standards for historian, as published in Title 36, Code of Federal Regulations, part 61) conducts research and writes a report on the age and use of two historic period, unimproved roads (SMB-H-600, SMB-H-601), with particular attention paid to their role during the use of the area by the U. S. Army in World War II training maneuvers (DTC/C-AMA). The project owner shall provide the historian's report to the DTCCL PI Historian for use in the possible DTCCL NRHP nomination. The project owner may undertake this task prior to Energy Commission certification of the project.	At least 15 days prior to ground disturbance, the project owner shall submit to the CPM the historian's report documenting the age and historical use of the two roads. Within 15 days after the CPM approves the report, the project owner shall forward it to the DTCCL PI-Historian.			
DF CUL-13: Archival Research on Blythe Army Air Base Reservoir Pipelines. The project owner shall ensure that a qualified architectural historian (must meet the U.S. Secretary of the Interior's Professional Qualifications Standards for historian, as published in Title 36, Code of Federal Regulations, part 61) conducts research to establish the current existence and locations of the water supply pipelines that connect the Blythe Army Air Base Reservoir pipelines to the former Blythe Army Air Base. The project owner shall ensure that the construction of the project's underground facilities that cross these old pipelines avoids impacting them. The project owner shall provide the historian's report to the DTCCL PI Historian for use in the possible DTCCL NRHP nomination. The project owner may undertake this task prior to Energy Commission certification of the project.	At least 15 days prior to excavating any trenches crossing the old Blythe Army Air Base Reservoir water pipelines, the project owner shall submit to the CPM the historian's report verifying the current presence or absence of the pipelines and, if they are present, a plan indicating how they will be avoided. Within 15 days after the CPM approves the report, the project owner shall forward it to the DTCCL PI-Historian			
DF CUL-14: Archival Research on Radio Communications Facility. The project owner shall ensure that a qualified architectural historian (must meet the U.S. Secretary of the Interior's Professional Qualifications Standards for historian, as published in Title 36, Code of Federal Regulations, part 61) conducts research to evaluate the CRHR eligibility of the radio communications facility, considering all pertinent register criteria, as well as integrity. If the facility is recommended as CRHR-eligible, the project owner shall propose ways to avoid or mitigate, to a less than significant level, the project's impacts to the facility's integrity of setting and integrity of feeling. The project owner may undertake this task prior to Energy Commission certification of the project	At least 45 days prior to construction, the project owner shall submit to the CPM the historian's recommendation, with supporting evidence, on the eligibility of the radio communications facility and, if it is eligible, a plan indicating how the project's impacts to the facility's integrity of setting and integrity of feeling will be avoided or mitigated to a less than significant level. Rationale: Proposed schedule change is in accordance with the project time-line. At least 30 days prior to construction, the project owner shall implement those elements of the submitted avoidance/mitigation plan approved by the CRS.			
DF CUL-15: Worker Environmental Awareness Program (WEAP). Prior to and for the duration of ground disturbance, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment at the project site, along the linear facilities routes, and at laydown areas, roads, and other ancillary areas. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended, but must be resumed when ground disturbance, such as landscaping, resumes. The training shall include: 1. A discussion of applicable laws and penalties under the law; 2. Samples or visuals of artifacts that might be found in the project vicinity; 3. A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed; 4. A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits; 5. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS; 6. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;	At least 30 days prior to the beginning of ground disturbance, the CRS shall provide the training program draft text and graphics and the informational brochure to the CPM for review and approval. At least 15 days prior to the beginning of ground disturbance, the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP trained worker to sign. Monthly, until ground disturbance is completed, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of workers who have completed the training in the prior month and a running total of all persons who have completed training to date.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
7. An informational brochure that identifies reporting procedures in the event of a discovery; 8. An acknowledgement form signed by each worker indicating that they have received the training; and 9. A sticker that shall be placed on hard hats indicating that environmental training has been completed. 10. No ground disturbance shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the CPM.				
DF CUL-16: Construction Monitoring Program. The project owner shall ensure that the CRS, alternate CRS, or CRMs, prevent construction impacts to undiscovered resources and shall further ensure that known resources are not impacted in an unanticipated manner, monitor full time all ground disturbances: 1. associated with construction-related grading and other earthwork; 2. for the trenches for underground communication lines and the natural gas pipeline; 3. for the holes for the transmission line support structures; 4. And for the jack-and-bore tunneling for underground conductor or cable lines or pipelines, that they monitor the excavation of the jack-and-bore entry and exit pits and examine, log, and screen auger backdirt samples, as detailed in the CRMMP. Full-time archaeological monitoring for this project shall be the archaeological monitoring of the earth-removing activities in the areas specified in the previous paragraph, for as long as the activities are ongoing. Where excavation equipment is actively removing dirt and hauling the excavated material farther than fifty feet from the location of active excavation, full-time archaeological monitoring shall require at least two monitors per excavation area. In this circumstance, one monitor shall observe the location of active excavation and a second monitor shall inspect the dumped material. For excavation areas where the excavated material is dumped no farther than fifty feet from the location of active excavation, one monitor shall both observe the location of active excavation and inspect the dumped material. A Native American monitor shall be obtained to monitor all of the ground disturbance described above. Contact lists of interested Native Americans and guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance to proceed without a Native American monitor. The research design in the CRMMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered. On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of noncompliance with the Conditions and/or applicable LORS. Copies of the daily monitoring logs shall be provided by the CRS to the CPM, if requested by the CPM, and to any affiliated Native American tribal entities that request such logs. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the MCR. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended. The CRS or alternate CRS shall report daily to the CPM on the status of the project's cultural resources-related activities, unless reducing or ending daily reporting is requested by the CRS and approved by the CPM. In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring and concurrently notify affiliated Native American tribal entities. The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff. Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS, or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these Conditions. Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided in the next MCR for the review of the CPM.	At least 30 days prior to the start of ground disturbance, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log. Monthly, while monitoring is on going, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS and shall attach any new DPR 523A forms completed for finds treated prescriptively, as specified in the CRMMP. At least 48 hours prior to implementing a proposed change in monitoring level, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication acceptable to the CPM) detailing the CRS's justification for changing the monitoring level. Daily, as long as no cultural resources are found, the CRS shall provide a statement that "no cultural resources over 50 years of age were discovered" to the CPM as an e-mail or in some other form of communication acceptable to the CPM, and any Indian tribes that request such statements. Weekly, during jack-and-bore tunneling for the underground transmission line, the project owner shall provide the CPM with copies of the soil and sediment descriptions and auger-back dirt screening logs kept by the CRS, alternate CRS, or CRMs, as detailed in the CRMMP. At least 24 hours prior to reducing or ending daily reporting, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication acceptable to the CPM) detailing the CRS's justification for reducing or ending daily reporting. No later than 30 days following the discovery of any Native American cultural materials, the project owner shall submit to the CPM copies of the information transmittal letters sent to the Chairpersons of the Native American tribes or groups who requested the information. Additionally, the project owner shall submit to the CPM copies of letters of transmittal for all subsequent responses to Native American requests for notification, consultation, and reports and records. Within 15 days of receiving them, the project owner shall submit to the CPM copies of any comments or information provided by Native Americans in response to the project owner's transmittals of information. The CPM shall provide a written response, or shall ensure the project owner provides a written response, to such comments within 5 business days.			
DF CUL-17: Authority to Halt Construction; Treatment Of Discoveries. The project owner shall grant authority to halt ground disturbance to the CRS, alternate CRS, PPA, PHA, and the CRMs in the event of a discovery. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS. In the event that a cultural resource over 50 years of age is found (or if younger, determined exceptionally significant by the CPM), or impacts to such a resource can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting, as provided in other Conditions, shall continue during the project's ground-disturbing activities elsewhere. The halting or redirection of ground disturbance shall remain in effect until the CRS has visited the discovery, and all of the following have occurred:	At least 30 days prior to the start of ground disturbance, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, PPA, PHA, and CRMs have the authority to halt ground disturbance in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning. Within 48 hours of the discovery of a resource of interest to Native Americans, the project owner shall ensure that the CRS notifies all Native American groups that expressed a desire to be notified in the event of such a discovery.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Cultural Resources (cont.)				
1. The CRS has notified the project owner, and the CPM has been notified within 24 hours of the discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning, including a description of the discovery (or changes in character or attributes), the action taken (i.e., work stoppage or redirection), a recommendation of CRHR eligibility, and recommendations for data recovery from any cultural resources discoveries, whether or not a determination of CRHR eligibility has been made. 2. If the discovery would be of interest to affiliated Native American tribal entities, the CPM shall ensure the CRS has notified, within 48 hours, all affiliated Native American tribal entities that expressed a desire to be notified in the event of such a discovery. The CRS shall inform the CPM if there are any barriers to performing the notification. 3. The CRS has completed field notes, measurements, and photography for a DPR 523 Primary form. Unless the find can be treated prescriptively, as specified in the CRMMP, the Description entry of the DPR 523 Primary form shall include a recommendation on the CRHR eligibility of the discovery. The project owner shall submit completed forms to the CPM. 4. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the discovery and approved the CRS's proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.	Unless the discovery can be treated prescriptively, as specified in the CRMMP, completed DPR 523 forms for resources newly discovered during ground disturbance shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever the CRS decides is more appropriate for the subject cultural resource.			
DF CUL-18: Cultural Resources Report (CRR). The project owner shall submit the final Cultural Resources Report (CRR) to the CPM for review and comment and to the BLM Palm Springs archaeologist for review and approval. The final CRR shall be written by or under the direction of the CRS. The final CRR shall report on all field activities including dates, times and locations, results, samplings, and analyses. All survey reports, revised and final Department of Parks and Recreation (DPR) 523 forms, data recovery reports, and any additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as appendices to the final CRR. If the project owner requests a suspension of ground disturbance and/or construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM and to the BLM Palm Springs archaeologist for review and approval on the same day as the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until ground disturbance and/or construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.	Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval. Within 180 days after completion of ground disturbance (including landscaping), the project owner shall submit the final CRR to the CPM for review and approval and to the BLM Palm Springs Field Office archaeologist for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification: of receipt shall be included in an appendix. Within 10 days after the CPM and the BLM Palm Springs Field Office archaeologist approve the CRR, the project owner shall provide documentation to the CPM confirming that copies of the final CRR have been provided to the SHPO, the CHRIS, the curating institution, if archaeological materials were collected, and to the Tribal Chairpersons of any Native American groups requesting copies of project-related reports.			
DF CUL-19 COMPLIANCE WITH BLM PROGRAMMATIC AGREEMENT. If provisions in the BLM Blythe Solar Power Plant Programmatic Agreement and associated implementation and monitoring programs conflict with or duplicate these Conditions of Certification, the BLM provisions shall take precedence. Provisions in these Conditions that are additional to or exceed BLM provisions and represent requirements under the Energy Commission's CEQA responsibilities shall continue to apply to the project's activities, contingent on BLM's approval.				
Hazardous Materials				
MM BLM-PHS-1: To protect against UXO-related hazards, the potential presence of UXO should be investigated in geophysical surveys performed by a company with specific expertise in UXO identification, and remnants of munitions or bullets identified during development of the subject property should be removed and disposed of in accordance with applicable LORS.	See DF WASTE-1. The project owner shall submit the UXO Identification, Training and Reporting Plan to the CPM for approval no less than 30 days prior to the initiation of construction activities at the site. The results of geophysical surveys shall be submitted to the CPM within 30 days of completion of the surveys.			
MM BLM-PHS-2: Abandoned Mine Lands (AML) openings should be identified, flagged and avoided if they pose a physical safety hazard. The Applicant should coordinate with the BLM to identify any hazards with the openings on public land so that BLM may develop mitigation measures to avoid the sites or mitigate related hazards. Such mitigation measures shall be consistent with the BLM's Abandoned Mine Land Program Policy Handbook (H-3720-1), as it may be amended from time to time, or with a comparable resource. The Applicant also shall coordinate with the owner of the site that appears to be on private land to mitigate any hazards associated with that opening.	At least 30 days prior to commencing construction, the project owner shall provide to the BLM AO for review and approval a plan for identifying, flagging, and avoiding any abandoned mine lands encountered on the site, and for implementing any mitigation measures the BLM deems necessary if AMLs are found.			
MM 3.7-1: Broken PV Module Detection and Handling Plan. If photovoltaic (PV) panels containing CdTe are used on the Project site, the Grant Holder shall prepare and implement a Broken PV Module Detection and Handling Plan. The plan shall describe the Grant Holder's plan for identifying, handling and disposing of PV modules that may break, chip, or crack at some point during the Modified Project's life cycle to ensure the safe handling, storage, transport, and recycling and/or disposal of the modules and related electrical components in a manner that is compliant with applicable law and protective of human health and the environment. The plan shall reflect best available peer-reviewed scientific information and, where scientific uncertainty exists about hazardous impacts, best precautionary actions. The plan shall be submitted to the BLM for review and approval prior to commencement of construction activities and prior to delivery of CdTe-containing PV panels to the project site and shall be distributed to all construction crew members and temporary and permanent employees prior to construction and operation of the Modified Project. All available data from the panel manufacturer(s) regarding materials used and safety procedures and/or concerns shall be appended to the plan to assist the BLM with identifying potential hazards and abatement measures.	At least 30 days prior to commencement of construction activities and/or delivery of CdTe-containing panels, whichever is earlier, the project owner shall submit the plan to the BLM AO for review and approval.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Hazardous Materials (cont.)				
DF HAZ-1: The project owner shall not use any hazardous materials not listed in Appendix A, below, or in greater quantities or strengths than those identified by chemical name in Appendix A, below, unless approved in advance by the Compliance Project Manager (CPM).	The project owner shall provide to the CPM, in the Annual Compliance Report, a list of hazardous materials contained at the facility.			
DF HAZ-2: The project owner shall concurrently provide a Hazardous Materials Business Plan (HMBP), and a Spill Prevention, Control, and Countermeasure Plan (SPCC) to the Riverside County Environmental Health Department (RCEHD), the Riverside County Fire Department (RCFD), and the CPM for review. After receiving comments from the RCEHD, the RCFD, and the CPM, the project owner shall reflect all recommendations in the final documents. Copies of the final HMBP shall then be provided to the RCEHD for information and to the CPM for approval**.**	At least 60 days prior to receiving any hazardous material on the site for commissioning or operations, the project owner shall provide a copy of a final Hazardous Materials Business Plan, a Spill Prevention, Control, and Countermeasure Plan, and a Process Safety Management Plan to the CPM for approval.			
DF HAZ-3: The project owner shall develop and implement a Safety Management Plan for the delivery and handling of liquid hazardous materials. The plan shall include procedures, protective equipment requirements, training and a checklist. It shall also include a section describing all measures to be implemented to prevent mixing of incompatible hazardous materials. This plan shall be applicable during construction, commissioning, and operation of the power plant.	At least 60 days prior to the delivery of any liquid hazardous material to the facility, the project owner shall provide a Safety Management Plan as described above to the CPM for review and approval.			
DF HAZ-4 (Deleted)				
DF HAZ-5: Prior to commencing construction, a site-specific Construction Site Security Plan for the construction phase shall be prepared and made available to the CPM for review and approval. The Construction Security Plan shall include the following: 1. perimeter security consisting of fencing enclosing the construction area; 2. security guards; 3. site access control consisting of a check-in procedure or tag system for construction personnel and visitors; 4. written standard procedures for employees, contractors and vendors when encountering suspicious objects or packages on site or off site; 5. protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency; and 6. evacuation procedures.	At least 30 days prior to commencing construction, the project owner shall notify the CPM that a site-specific Construction Security Plan is available for review and approval.			
DF HAZ-6: The project owner shall also prepare a site-specific security plan for the commissioning and operational phases that will be available to the CPM for review and approval. The project owner shall implement site security measures that address physical site security and hazardous materials storage. The level of security to be implemented shall not be less than that described below (as per NERC 2002). The Operation Security Plan shall include the following: 1. Permanent full perimeter fence or wall, at least eight feet high around the Solar Field; 2. Main entrance security gate, either hand operated or motorized; 3. Evacuation procedures; 4. Protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency; 5. Written standard procedures for employees, contractors, and vendors when encountering suspicious objects or packages on site or off site; 6. A. a statement (refer to sample, ATTACHMENT A), signed by the project owner certifying that background investigations have been conducted on all project personnel. Background investigations shall be restricted to determine the accuracy of employee identity and employment history and shall be conducted in accordance with state and federal laws regarding security and privacy; B. a statement(s) (refer to sample, ATTACHMENT B), signed by the contractor or authorized representative(s) for any permanent contractors or other technical contractors (as determined by the CPM after consultation with the project owner), that are present at any time on the site to repair, maintain, investigate, or conduct any other technical duties involving critical components (as determined by the CPM after consultation with the project owner) certifying that background investigations have been conducted on contractors who visit the project site; 7. Site access controls for employees, contractors, vendors, and visitors; 8. If required by law, a statement(s) (refer to sample, ATTACHMENT C), signed by the owners or authorized representative of hazardous materials transport vendors, certifying that they have prepared and implemented security plans in compliance with 49 CFR 172.802, and that they have conducted employee background investigations in accordance with 49 CFR Part 1572, subparts A and B; 9. Closed circuit TV (CCTV) monitoring system, recordable, and viewable in the O & M Building with cameras able to pan, tilt, and zoom, have low-light capability, and are able to view the outside entrance to the O & M Building, and the front gate. The project owner shall fully implement the security plans and obtain CPM approval of any substantive modifications to those security plans. The CPM may authorize modifications to these measures, or may require additional measures	At least 30 days prior to the initial receipt of operations-related hazardous materials on site, the project owner shall notify the CPM that a site-specific operations site security plan is available for review and approval. In the annual compliance report, the project owner shall include a statement that all current project employee and appropriate contractor background investigations have been performed, and that updated certification statements have been appended to the operations security plan. In the annual compliance report, the project owner shall include a statement that the operations security plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Hazardous Materials (cont.)				
such as protective barriers for critical power plant components depending upon circumstances unique to the facility or in response to industry-related standards, security concerns, cyber security, or additional guidance provided by the U.S. Department of Homeland Security, the U.S. Department of Energy, or the North American Electrical Reliability Corporation, after consultation with both appropriate law enforcement agencies and the applicant.				
Noise				
MM 3.10-1: Heavy equipment operation and noisy construction work relating to any project features within 1 mile of an existing residence shall be restricted to between the hours of 7:00 a.m. and 10:00 p.m., and shall not occur on Sundays or federal holidays.	Modifies DF NOISE-6; see below.			
DF NOISE-1: Public Notification Process. At least 15 days prior to the start of ground disturbance, the project owner shall notify all residents within one mile of the project site and the linear facilities, by mail or by other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project. If the telephone is not staffed 24 hours a day, the project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the project site during construction where it is visible to passersby. This telephone number shall be maintained until the project has been operational for at least one year.	Prior to ground disturbance, the project owner shall transmit to the compliance project manager (CPM) a statement, signed by the project owner's project manager, stating that the above notification has been performed, and describing the method of that notification. This communication shall also verify that the telephone number has been established and posted at the site, and shall provide that telephone number.			
DF NOISE-2: Noise Complaint Process. Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The project owner or authorized agent shall: • use the Noise Complaint Resolution Form (below), or a functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint; • attempt to contact the person(s) making the noise complaint within 24 hours; • conduct an investigation to determine the source of noise in the complaint; • if the noise is project related, take all feasible measures to reduce the source of the noise; and • submit a report documenting the complaint and actions taken. The report shall include: a complaint summary, including the final results of noise reduction efforts and, if obtainable, a signed statement by the complainant stating that the noise problem has been resolved to the complainant's satisfaction.	Within five days of receiving a noise complaint, the project owner shall file a Noise Complaint Resolution Form, shown below, with both the local jurisdiction and the CPM, that documents the resolution of the complaint. If mitigation is required to resolve the complaint, and the complaint is not resolved within a three-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is performed and complete.			
DF NOISE-3: Employee Noise Control Program – Construction. The project owner shall submit to the CPM for review and approval a noise control program. The noise control program shall be used to reduce employee exposure to high (above permissible) noise levels during construction in accordance to the applicable OSHA and Cal-OSHA standards.	At least 30 days prior to the start of ground disturbance, the project owner shall submit the noise control program to the CPM. The project owner shall make the program available to Cal-OSHA upon request.			
DF NOISE-4 (Deleted)				
DF NOISE-5 (Deleted)				
DF NOISE-6: Construction Restrictions. During project construction, heavy equipment operation and noisy construction work relating to any project features within ¼ mile of an existing residence shall be restricted to the times delineated below, unless a special permit has been issued by the County of Riverside: *Mondays through Fridays:* June through September: 6 a.m. to 7 p.m. October through May: 6 a.m. to 6 p.m. *Saturdays*: 9 a.m. to 5 p.m. *Sundays and Federal holidays*: No Construction Allowed Haul trucks and other engine-powered equipment shall be equipped with adequate mufflers. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.	Prior to ground disturbance, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout the construction of the project.			
DF NOISE-7 (Deleted)				
DF PAL-1: The project owner shall provide the CPM with the resume and qualifications of its PRS for review and approval. If the approved PRS is replaced prior to completion of project mitigation and submittal of the Paleontologic Resources Report, the project owner shall obtain CPM approval of the replacement PRS. The project owner shall keep resumes on file for qualified paleontologic resource monitors (PRMs). If a PRM is replaced, the resume of the replacement PRM shall also be provided to the CPM. The PRS resume shall include the names and phone numbers of references. The resume shall also demonstrate to the satisfaction of the CPM the appropriate education and experience to accomplish the required paleontologic resource tasks.	(1) At least 60 days prior to the start of ground disturbance, the project owner shall submit a resume and statement of availability of its designated PRS for on-site work. (2) At least 20 days prior to ground disturbance, the PRS or project owner shall provide a letter with resumes naming anticipated monitors for the project, stating that the identified monitors meet the minimum qualifications for paleontologic resource monitoring required by the condition. If additional monitors are obtained during the project, the PRS shall provide additional letters and resumes to the CPM. The letter shall be provided to the CPM no later than one week prior to the monitor's beginning on-site duties.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Paleontological Resources				
As determined by the CPM, the PRS shall meet the minimum qualifications for a vertebrate paleontologist as described in the Society of Vertebrate Paleontology (SVP) guidelines of 1995. The experience of the PRS shall include the following: 1. Institutional affiliations, appropriate credentials, and college degree; 2. Ability to recognize and collect fossils in the field; 3. Local geologic and biostratigraphic expertise; 4. Proficiency in identifying vertebrate and invertebrate fossils; and 5. At least three years of paleontologic resource mitigation and field experience in California and at least one year of experience leading paleontologic resource mitigation and field activities. The project owner shall ensure that the PRS obtains qualified paleontologic resource monitors to monitor as he or she deems necessary on the project. Paleontologic resource monitors (PRMs) shall have the equivalent of the following qualifications: • BS or BA degree in geology or paleontology and one year of experience monitoring in California; or • AS or AA in geology, paleontology, or biology and four years' experience monitoring in California; or • Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in California.	(3) Prior to the termination or release of a PRS, the project owner shall submit the resume of the proposed new PRS to the CPM for review and approval.			
DF PAL-2: The project owner shall provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant, construction lay-down areas, and all related facilities. Maps shall identify all areas of the project where ground disturbance is anticipated. If the PRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the PRS and CPM. The site grading plan and plan and profile drawings for the utility lines would be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and be at a scale between 1 inch = 40 feet and 1 inch = 100 feet. If the footprint of the project or its linear facilities changes, the project owner shall provide maps and drawings reflecting those changes to the PRS and CPM. If construction of the project proceeds in phases, maps and drawings may be submitted prior to the start of each phase. A letter identifying the proposed schedule of each project phase shall be provided to the PRS and CPM. Before work commences on affected phases, the project owner shall notify the PRS and CPM of any construction phase scheduling changes. At a minimum, the project owner shall ensure that the PRS or PRM consults weekly with the project superintendent or construction field manager to confirm area(s) to be worked the following week and until ground disturbance is completed.	(1) At least 30 days prior to the start of ground disturbance, the project owner shall provide the maps and drawings to the PRS and CPM. (2) If there are changes to the footprint of the project, revised maps and drawings shall be provided to the PRS and CPM at least 15 days prior to the start of ground disturbance. (3) If there are changes to the scheduling of the construction phases, the project owner shall submit a letter to the CPM within 5 days of identifying the changes.			
DF PAL-3: The project owner shall ensure that the PRS prepares, and the project owner submits to the CPM for review and approval, a paleontologic resources monitoring and mitigation plan (PRMMP) to identify general and specific measures to minimize potential impacts to significant paleontologic resources. Approval of the PRMMP by the CPM shall occur prior to any ground disturbance. The PRMMP shall function as the formal guide for monitoring, collecting, and sampling activities and may be modified with CPM approval. This document shall be used as the basis of discussion when on-site decisions or changes are proposed. Copies of the PRMMP shall reside with the PRS, each monitor, the project owner's on-site manager, and the CPM. The PRMMP shall be developed in accordance with the guidelines of the Society of Vertebrate Paleontology (SVP 1995) and shall include, but not be limited, to the following: 1. Assurance that the performance and sequence of project-related tasks, such as any literature searches, pre-construction surveys, worker environmental training, fieldwork, flagging or staking, construction monitoring, mapping and data recovery, fossil preparation and collection, identification and inventory, preparation of final reports, and transmittal of materials for curation will be performed according to PRMMP procedures; 2. Identification of the person(s) expected to assist with each of the tasks identified within the PRMMP and the conditions of certification; 3. A thorough discussion of the anticipated geologic units expected to be encountered, the location and depth of the units relative to the project when known, and the known sensitivity of those units based on the occurrence of fossils either in that unit or in correlative units; 4. An explanation of why, how, and how much sampling is expected to take place and in what units. Include descriptions of different sampling procedures that shall be used for fine-grained and coarse-grained units; 5. A discussion of the locations of where the monitoring of project construction activities is deemed necessary, and a proposed plan for monitoring and sampling; 6. A discussion of procedures to be followed in the event of a significant fossil discovery, halting construction, resuming construction, and how notifications will be performed; 7. A discussion of equipment and supplies necessary for collection of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits;	At least 30 days prior to ground disturbance, the project owner shall provide a copy of the PRMMP to the CPM. The PRMMP shall include an affidavit of authorship by the PRS and acceptance of the PRMMP by the project owner evidenced by a signature.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Paleontological Resources (cont.)				
8. Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum, which meet the Society of Vertebrate Paleontology's standards and requirements for the curation of paleontologic resources; 9. Identification of the institution that has agreed to receive data and fossil materials collected, requirements or specifications for materials delivered for curation and how they will be met, and the name and phone number of the contact person at the institution; and 10. A copy of the paleontologic conditions of certification.				
DF PAL-4: Prior to ground disturbance and for the duration of construction activities involving ground disturbance, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for the following workers: project managers, construction supervisors, foremen, and general workers involved with or who operate ground-disturbing equipment or tools. Workers shall not excavate in sensitive units prior to receiving CPM-approved worker training. Worker training shall consist of an initial in-person PRS training or may utilize a CPM-approved video or other presentation format during the project kick off for those mentioned above. Following initial training, a CPM-approved video or other approved training presentation/materials, or in-person training may be used for new employees. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or other areas of interest or concern. No ground disturbance shall occur prior to CPM approval of the Worker Environmental Awareness Program (WEAP), unless specifically approved by the CPM. The WEAP shall address the possibility of encountering paleontologic resources in the field, the sensitivity and importance of these resources, and legal obligations to preserve and protect those resources. The training shall include: 1. A discussion of applicable laws and penalties under the law; 2. Good quality photographs or physical examples of vertebrate fossils for project sites containing units of high paleontologic sensitivity; 3. Information that the PRS or PRM has the authority to halt or redirect construction in the event of a discovery or unanticipated impact to a paleontologic resource; 4. Instruction that employees are to halt or redirect work in the vicinity of a find and to contact their supervisor and the PRS or PRM; 5. An informational brochure that identifies reporting procedures in the event of a discovery; 6. A WEAP certification of completion form signed by each worker indicating that he/she has received the training; and 7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.	(1) At least 30 days prior to ground disturbance, the project owner shall submit the proposed WEAP, including the brochure, with the set of reporting procedures for workers to follow. (2) At least 30 days prior to ground disturbance, the project owner shall submit the training program presentation/materials to the CPM for approval if the project owner is planning to use a presentation format other than an in-person trainer for training. (3) If the owner requests an alternate paleontologic trainer, the resume and qualifications of the trainer shall be submitted to the CPM for review and approval prior to installation of an alternate trainer. Alternate trainers shall not conduct training prior to CPM authorization. (4) In the monthly compliance report (MCR), the project owner shall provide copies of the WEAP certification of completion forms with the names of those trained and the trainer or type of training (in-person or other approved format) offered that month. The MCR shall also include a running total of all persons who have completed the training to date.			
DF PAL-5: The project owner shall ensure that the PRS and PRM(s) monitor consistent with the PRMMP all construction-related grading, excavation, trenching, and augering in areas where potential fossil-bearing materials have been identified, both at the site and along any constructed linear facilities associated with the project. In the event that the PRS determines full-time monitoring is not necessary in locations that were identified as potentially fossil bearing in the PRMMP, the project owner shall notify and seek the concurrence of the CPM. The project owner shall ensure that the PRS and PRM(s) have the authority to halt or redirect construction if paleontologic resources are encountered. The project owner shall ensure that there is no interference with monitoring activities unless directed by the PRS. Monitoring activities shall be conducted as follows: 1. Any change of monitoring from the accepted schedule in the PRMMP shall be proposed in a letter or email from the PRS and the project owner to the CPM prior to the change in monitoring and will be included in the monthly compliance report. The letter or email shall include the justification for the change in monitoring and be submitted to the CPM for review and approval. 2. The project owner shall ensure that the PRM(s) keep a daily monitoring log of paleontologic resource activities. The PRS may informally discuss paleontologic resource monitoring and mitigation activities with the CPM at any time. 3. The project owner shall ensure that the PRS notifies the CPM within 24 hours of the occurrence of any incidents of non-compliance with any paleontologic resources conditions of certification. The PRS shall recommend corrective action to resolve the issues or achieve compliance with the conditions of certification. 4. For any significant paleontologic resources encountered, either the project owner or the PRS shall notify the CPM within 24 hours, or Monday morning in the case of a weekend event, where construction has been halted because of a paleontologic find. The project owner shall ensure that the PRS prepares a summary of monitoring and other paleontologic activities placed in the monthly compliance reports. The summary will include the name(s) of PRS or PRM(s) active during the month; general descriptions of training and monitored construction activities; and general locations of excavations, grading, and other activities. A section of the report shall include the geologic units or subunits encountered,	The project owner shall ensure that the PRS submits the summary of monitoring and paleontologic activities in the MCR. When feasible, the CPM shall be notified 10 days in advance of any proposed changes in monitoring different from the plan identified in the PRMMP. If there is any unforeseen change in monitoring, the notice shall be given as soon as possible prior to implementation of the change.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Paleontological Resources (cont.)				
descriptions of samplings within each unit, and a list of identified fossils. A final section of the report will address any issues or concerns about the project relating to paleontologic monitoring, including any incidents of non-compliance or any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the report shall include an explanation in the summary as to why monitoring was not conducted.				
DF PAL-6: The project owner, through the designated PRS, shall ensure that all components of the PRMMP are adequately performed including collection of fossil materials, preparation of fossil materials for analysis, analysis of fossils, identification and inventory of fossils, the preparation of fossils for curation, and the delivery for curation of all significant paleontologic resource materials encountered and collected during project construction.	The project owner shall maintain in his/her compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. The project owner shall maintain these files for a period of three years after project completion and approval of the CPM-approved paleontologic resource report (see DF **PAL-7**). The project owner shall be responsible for paying any curation fees charged by the museum for fossils collected and curated as a result of paleontologic mitigation. A copy of the letter of transmittal submitting the fossils to the curating institution shall be provided to the CPM.			
DF PAL-7: The project owner shall ensure preparation of a Paleontologic Resources Report (PRR) by the designated PRS. The PRR shall be prepared following completion of the ground-disturbing activities. The PRR shall include an analysis of the collected fossil materials and related information and submit it to the CPM for review and approval. The report shall include, but is not limited to, a description and inventory of recovered fossil materials; a map showing the location of paleontologic resources encountered; determinations of sensitivity and significance; and a statement by the PRS that project impacts to paleontologic resources have been mitigated below the level of significance.	Within 90 days after completion of ground-disturbing activities, including landscaping, the project owner shall submit the PRR under confidential cover to the CPM**.**			
Recreation				
MM BLM-REC-1: The Applicant shall engage residents of Blythe, recreation user groups, interested public, organizations, and agencies to identify specific recreation management prescriptions to provide alternative recreational opportunities and experiences on the lands outside the BSPP site boundary. This effort shall delineate what the BLM and its partners would do to provide any additional management, marketing, monitoring, and administrative actions to meet recreational benefit demands for this area.	Begin coordination no less than 60 days prior to construction and provide documentation of the coordination effort to the BLM AO and affected jurisdictions at least 30 days prior to construction.			
MM BLM-REC-2: The Applicant shall prepare and distribute interpretative materials including a construction schedule and safety information regarding trucks and other heavy equipment on local roads, to users of the Midland, Mule Mountains and La Posa LTVAs, Wiley Wells and Coon Hollow Campgrounds, and BLM kiosks stating the development of the solar facilities at the BSPP site and the temporary or permanent closure of approximately 6,000 acres of public land to recreational use. The BLM authorized officer shall approve the draft materials prior to distribution. To clarify the method and means that the Applicant shall use to communicate with the public and affected jurisdictions about the Blythe Solar Power Project (see, e.g., BLM-REC-2, BLM-REC-5 and BLM-OHV-1), the Applicant shall prepare a one-page fact sheet and submit it to the BLM's Palm Springs South Coast Field Office for appropriate distribution.	Prepare and distribute interpretive materials, including a construction schedule and safety information, prior to construction.			
MM BLM-REC-3: The Applicant shall encourage project workers to utilize local housing or private RV parks in Blythe and/or nearby communities.	Prior to and during construction, the project owner shall Encourage Project workers to utilize local housing or private RV parks in Blythe and/or nearby communities rather than recreational camping facilities.			
MM BLM-REC-4: No less than 15 days prior to construction, the Applicant shall coordinate construction activities and the BSPP construction schedule with the authorized officer for the recreation areas impacted. The Applicant shall schedule construction activities to avoid heavy recreational use periods in coordination with and at the discretion of the authorized officer. The Applicant shall locate construction equipment to avoid temporary preclusion of recreation areas in accordance with the recommendation of the authorized officer. The Applicant shall document its coordination efforts with the authorized officer and provide this documentation to the Lead Agencies and affected jurisdictions prior to construction.	Begin coordination no less than 60 days prior to construction and provide documentation of the coordination effort to the BLM AO and affected jurisdictions at least 30 days prior to construction.			
MM BLM-REC-5: The Applicant shall coordinate with the authorized officer for the applicable federal, State, or local parks and recreational facilities at least 15 days before construction in order to identify alternative recreation facilities that may be used by the public during construction. The Applicant shall post a public notice at recreation facilities that are to be closed or where access would be limited during project construction. The Applicant shall document its coordination efforts with the parks and recreation departments and provide this documentation to the Lead Agencies and all affected jurisdictions prior to construction. To clarify the method and means that the Applicant shall use to communicate with the public and affected jurisdictions about the Blythe Solar Power Project (see, e.g., BLM-REC-2, BLM-REC-5 and OHV-1), the Applicant shall prepare a one-page fact sheet and submit it to the BLM's Palm Springs South Coast Field Office for appropriate distribution.	Begin coordination no less than 60 days prior to construction and provide documentation of the coordination effort to the BLM AO and affected jurisdictions at least 30 days prior to construction.			
MM BLM-OHV-1: No less than 15 days prior to construction, the Applicant shall coordinate with the authorized officer administering any NECO Plan-designated open routes to establish temporary closure of the routes to avoid construction area hazards, if the route is deemed unsafe to use during construction. The Applicant shall post a public notice of the temporary route closure and penalties for any off route OHV activities. The Applicant shall document its coordination efforts with the authorized officer and submit this documentation to the BLM and other agencies affected prior to construction. To clarify the method and means that the Applicant shall use to communicate with the public and	Begin coordination no less than 60 days prior to construction and provide documentation of the coordination effort to the BLM AO at least 30 days prior to construction.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Recreation (cont.)				
affected jurisdictions about the Blythe Solar Power Project (see, e.g., BLM-REC-2, BLM-REC-5 and BLM- OHV-1), the Applicant shall prepare a one-page fact sheet and submit it to the BLM's Palm Springs South Coast Field Office for appropriate distribution.				
MM BLM-OHV-2: The BLM may require the Applicant, in consultation with the BLM, to reestablish north/south OHV connectivity to the west side of the Big Maria Wilderness Area and to the northeast side of the Palen/McCoy Wilderness Area.	Maintain north/south OHV connectivity to the west side of the Big Maria Wilderness Area and to the northeast side of the Palen-McCoy Wilderness Area.			
Socioeconomics				
DF SOCIO-1: The project owner shall submit a "No Trespassing" letter to the satisfaction of the Colorado River Station of the Riverside County Sheriff's Department. The "No Trespassing" letter shall remain on file throughout construction and operation of the project.	At least 30 days prior to the start of construction, the project owner shall provide a copy of the letter to the Colorado River Station of the Riverside County Sheriff's Department for review and to the CPM for review and approval.			
Soil and Water Resources				
MM BLM-SOIL&WATER-18: The proposed evaporation ponds shall be sized so as to maintain no less than one foot of freeboard during storm conditions. Specifically, the ponds shall be sized to accommodate operational discharges plus a 25-year storm event, with no less than one foot of freeboard.	Final design must show that evaporation ponds are designed to be able to accommodate operational discharge plus a 25-year storm event.			
DF GEO-1: The Soils Engineering Report required by Section 1803 of the 2010 CBC should specifically include laboratory test data, associated geotechnical engineering analyses, and a thorough discussion of corrosive soils, hydrocompaction or dynamic compaction; and the presence of expansive clay soils. The report should also include recommendations for ground improvement and/or foundation systems necessary to mitigate these potential geologic hazards, if present.	The project owner shall include in the application for a grading permit a copy of the Soils Engineering Report which addresses the potential for liquefaction; settlement due to compressible soils, ground water withdrawal, hydrocompaction, or dynamic compaction; and the possible presence of expansive clay soils, and a summary of how the results of the analyses were incorporated into the project foundation and grading plan design for review and comment by the Chief Building Official (CBO). A copy of the Soils Engineering Report, application for grading permit and any comments by the CBO are to be provided to the CPM at least 30 days prior to grading.			
DF SOIL&WATER-1: Drainage Erosion and Sedimentation Control Plan. Prior to site mobilization, the project owner shall obtain the Compliance Project Manager (CPM) approval of the Drainage Erosion and Sedimentation Control Plan (DESCP) for managing stormwater during project construction and operations as normally administered by the County of Riverside. The DESCP must ensure proper protection of water quality and soil resources, demonstrate no increase in off-site flooding potential, include provisions for sediment and stormwater retention from both the power block, solar fields and transmission right of way to meet any Riverside County requirements, address exposed soil treatments in the solar fields for both road and non-road surfaces, and identify all monitoring and maintenance activities. The DESCP shall contain, at minimum, the elements presented below that outline site management activities and erosion and sediment-control Best Management Practices (BMP) to be implemented during site mobilization, excavation, construction, and post construction (operating) activities. A. ***Vicinity Map*** – A map(s), at a minimum scale one- inch to 500 feet, shall be provided indicating the location of all project elements (construction sites, laydown area, pipelines) with depictions of all significant geographic features including swales, storm drains, and sensitive areas. B. ***Site Delineation*** – All areas subject to soil disturbance for the proposed project (project phases, laydown area, all linear facilities, landscaping areas, and any other project elements) shall be delineated showing boundary lines of all construction areas and the location of all existing and proposed structures, pipelines, roads, and drainage facilities. C. ***Watercourses and Critical Areas*** – The DESCP shall show the location of all nearby watercourses including swales, storm drains, and drainage ditches. It shall indicate the proximity of those features to the proposed project construction, laydown, and landscape areas and all transmission and pipeline construction corridors. Furthermore, earthwork and temporary construction related activities shall be conducted such that off-site resources are protected from impacts due to redirection of flood flows around and through the site. Construction activities shall proceed in a manner so as to minimize exposure of facilities to construction period flooding. Any temporary diversion channels shall be adequately designed for flood conveyance capable of protecting the construction site while not contributing to on-site or off-site erosion. D. ***Drainage Map*** – The DESCP shall provide a topographic site map(s), at a minimum scale of 1 inch to 200 feet, showing existing, interim, and proposed drainage swales and drainage systems and drainage-area boundaries. On the map, spot elevations are required where relatively flat conditions exist. The spot elevations and contours shall be extended off site for a minimum distance of 100 feet. E. ***Drainage of Project Site Narrative*** – The DESCP shall include a narrative of the drainage measures necessary to protect the site and potentially affected soil and water resources within the drainage downstream of the site. The narrative shall include the summary pages from the hydraulic analysis prepared by a professional engineer and erosion control specialist. The narrative shall state the watershed size(s) in acres that was used in the calculation of drainage features.	No later than 30 days prior to start of site mobilization, the project owner shall submit a copy of the final DESCP to the CPM for review and comment and to the County of Riverside and the CRBWQCB if required. The CPM shall consider comments if received by the county and CRBRWQCB before approval of the DESCP. The DESCP shall be consistent with the grading and drainage plan as required by DF CIVIL-1, and relevant portions of the DESCP shall clearly show approval by the chief building official. The project owner shall provide in the monthly compliance report a narrative on the effectiveness of the drainage, erosion, and sediment-control measures and the results of monitoring and maintenance activities. Once operational, the project owner shall update and maintain the DESCP for the life of the project and shall provide in the annual compliance report information on the results of monitoring and maintenance activities.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Soil and Water Resources (cont.)				
F. ***Clearing and Grading Plans*** – The DESCP shall provide a delineation of all areas to be cleared of vegetation and areas to be preserved. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross sections, or other means. The locations of any disposal areas, fills, or other special features shall also be shown. Existing and proposed topography shall be illustrated by tying in proposed contours with existing topography. G. ***Clearing and Grading Narrative*** – The DESCP shall include a table with the estimated quantities of material excavated or filled for the site and all project elements (project site, laydown area, transmission and pipeline corridors, roadways, and bridges) whether such excavation or fill is temporary or permanent, and the amount of such material to be imported or exported. H. ***Soil Wind and Water Erosion Control*** – The plan shall address exposed soil treatments to be used during construction and operation of the proposed project for both road and non-road surfaces including specifically identifying all chemical based dust palliatives, soil bonding, and weighting agents appropriate for use at the proposed project site that would not cause adverse effects to vegetation. BMPs shall include measures designed to prevent wind and water erosion including application of chemical dust palliatives after rough grading to limit water use. All dust palliatives, soil binders, and weighting agents shall be approved by the CPM prior to use. I. ***Best Management Practices Plan*** – The DESCP shall identify on the topographic site map(s) the location of the site specific BMPs to be employed during each phase of construction (initial grading, project element excavation and construction, and final grading/stabilization). BMPs shall include measures designed to control dust, stabilize construction access roads and entrances, and control storm water runoff and sediment transport. J. ***Best Management Practices Narrative*** – The DESCP shall show the location (as identified in (I) above), timing, and maintenance schedule of all erosion- and sediment-control BMPs to be used prior to initial grading, during all project element (site, pipelines) excavations and construction, final grading/stabilization, and operation. Separate BMP implementation schedules shall be provided for each project element for each phase of construction. The maintenance schedule shall include post-construction maintenance of structural-control BMPs, or a statement provided about when such information would be available. K. ***Project Schedule*** – The DESCP shall identify on the topographic site map the location of the site-specific BMPs to be employed during each phase of construction (initial grading, project element construction, and final grading/stabilization). Separate BMP implementation schedules shall be provided for each Project element for each phase of construction. L. ***Erosion Control Drawings*** – The erosion-control drawings and narrative shall be designed, stamped and sealed by a professional engineer or erosion control specialist. M. ***Agency Comments*** – The DESCP shall include copies of recommendations, conditions, and provisions from the California Department of Fish and Game (CDFG) and Colorado River Basin Regional Water Quality Control Board (CRBWQCB). N. **Monitoring Plan** – Monitoring activities shall include routine measurement of the volume of accumulated sediment in the onsite drainage ditches.				
DF SOIL&WATER-2: To mitigate the impact from project pumping, the project owner shall identify and implement offset measures to mitigate the increase in discharge from surface water to groundwater that affects recharge from the Palo Verde Valley Groundwater Basin (USGS) to the Palo Verde Mesa Groundwater Basin (USGS). The project owner shall implement **SOIL&WATER-16** to evaluate the change in recharge over the life of the project including any latency effects from project pumping. The offset measures shall consider water conservation projects such as payment for irrigation improvements in Palo Verde Irrigation District, land fallowing, and/or BLM's Tamarisk Removal Program or other proposed mitigation activities acceptable to the CPM. The activities proposed for mitigation shall be outlined in a Water Supply Plan that shall be provided to the CPM for review and approval and which shall include the following at a minimum: A. Identification of the water offsets as determined in **SOIL&WATER-16**; B. Demonstration of the project owner's ability to conduct the activity; C. Whether any governmental approval of the identified offset will be needed, and if so, whether additional approval will require compliance with CEQA or NEPA; D. Demonstration of how much water is provided by each of the offset measures; E. An estimated schedule for completion of the activities; F. Performance measures that would be used to evaluate the amount of water replaced by the proposed offset measures; and G. A Monitoring and Reporting Plan outlining the steps necessary and proposed frequency of reporting to show the activities are achieving the intended benefits of the water supply offsets;	The project owner shall submit a Water Supply Plan to the CPM for review and approval 30 days before the start of extraction of groundwater for construction or operation. The project owner shall implement the activities reviewed and approved in the Water Supply Plan in accordance with the agreed upon schedule in the Water Supply Plan. If agreement with the CPM on identification or implementation of offset activities cannot be achieved the project owner shall immediately halt construction or operation until the agreed upon activities can be identified and implemented.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Soil and Water Resources (cont.)				
DF SOIL&WATER-3: Project Groundwater Wells, Pre-Well Installation. The project owner proposes to construct and operate up to three (3) onsite groundwater supply wells that produce water from the Palo Verde Mesa Groundwater Basin (PVMGB). The project owner shall ensure that the wells are completed in accordance with all applicable state and local water well construction permits and requirements. Prior to initiation of well construction activities, the project owner shall submit for review and comment a well construction packet to the County of Riverside and fees normally required for the county's well permit, with copies to the CPM. The project shall not construct a well or extract and use groundwater until an approval has been issued by the CPM to construct and operate the well. Wells permitted and installed as part of pre-construction field investigations that subsequently are planned for use as project water supply wells require CPM approval prior to their use to supply water to the project. ***Post-Well Installation*.** The project owner shall provide documentation as required under County permit conditions to the CPM that the well has been properly completed. In accordance with California's Water Code section 13754, the driller of the well shall submit to the DWR a Well Completion Report for each well installed. The project owner shall ensure the Well Completion reports are submitted. The project owner shall ensure compliance with all county water well standards and County requirements for the life of the wells and shall provide the CPM with two copies each of all monitoring or other reports required for compliance with the County of Riverside water well standards and operation requirements, as well as any changes made to the operation of the well.	The project owner shall do all of the following: a. No later than 60 days prior to the construction of the onsite groundwater production wells, the project owner shall submit to the CPM a copy of the water well construction packet submitted to the County of Riverside. b. No later than 30 days prior to the construction of the onsite groundwater production wells, the project owner shall submit a copy of written concurrence received from the County of Riverside that the proposed well construction activities comply with all county well requirements and meet the requirements established by the county's water well permit program. The CPM shall provide approval to the project owner of the well location and operation within 10 days of receipt of the County of Riverside's concurrence with the proposed well construction activities. c. No later than 60 days after installation of each well at the project site, the project owner shall ensure that the well driller submits a Well Completion Report to the DWR with a copy provided to the CPM. The project owner shall submit to the CPM together with the Well Completion Report a copy of well drilling logs, water quality analyses, and any inspection reports. Additionally no later than 60 days after installation of each well the project owner shall submit documentation to the CPM and the CRBRWQCB that well drilling activities were conducted in compliance with Title 23, California Code of Regulations, Chapter 15, Discharges of Hazardous Wastes to Land, (23 CCR, sections 2510 et seq.) and that any onsite drilling sumps used for Project drilling activities were removed in compliance with 23 CCR section 2511(c) During well construction and for the operational life of the well, the project owner shall submit two copies to the CPM of any proposed well construction or operation changes.			
DF SOIL&WATER-4: Construction and Operation Water Use. The proposed project's use of groundwater during construction shall not exceed 1,200 af during the 48 months of construction and an annual average of 40 afy during operation. Prior to the use of groundwater for construction, the project owner shall install and maintain metering devices as part of the water supply and distribution system to document project water use and to monitor and record, in gallons per day, the total volume(s) of water supplied to the project from this water source. The metering devices shall be operational for the life of the project.	At least 10 days prior to the start of groundwater pumping for construction of the proposed project, the project owner shall submit to the CPM a copy of evidence that metering devices have been installed and are operational. Beginning six months after the start of construction, the project owner shall prepare a semi-annual summary of amount of water used for construction purposes. The summary shall include the monthly range and monthly average of daily water usage in gallons per day. The project owner shall prepare an annual summary, which shall include daily usage, monthly range and monthly average of daily water usage in gallons per day, and total water used on a monthly and annual basis in acre-feet. For years subsequent to the initial year of operation, the annual summary shall also include the yearly range and yearly average water use by source. For calculating the total water use, the term "year" will correspond to the date established for the annual compliance report submittal.			
DF SOIL&WATER-5: Groundwater Level Monitoring, Mitigation, and Reporting Plan. The project owner shall submit a Groundwater Level Monitoring, Mitigation, and Reporting Plan to the CPM for review and approval in advance of using onsite wells to supply groundwater for construction activities. The Groundwater Level Monitoring, Mitigation, and Reporting Plan shall provide detailed methodology for monitoring background and site groundwater levels. Monitoring shall include pre-construction, construction, and operational water use. The plan shall establish pre-construction groundwater level trends from available data that can be quantitatively used as a baseline to establish pre-Project water level trends and to subsequently compare to operational Project pumping water level data. A. ***Prior to Project Construction:*** 1. A well reconnaissance shall be conducted to investigate and document the condition of existing water supply wells as established by the groundwater model and Condition A.2 below, provided that access is granted by the well owners. The reconnaissance shall include sending notices by registered mail to all property owners for wells identified under Condition A.2 below. 2. The monitoring network for offsite wells shall be defined by the groundwater model developed for the AFC, using the lower transmissivity value derived from aquifer testing on the site, so as to provide a conservative estimate of the potential impact, and to identify the area predicted to show a water level change of one feet or more at the end of construction and at the end of operation. 3. Monitor to establish preconstruction conditions. The network of monitoring wells shall make use of existing wells in the basin that are accessible and would satisfy the requirements for the monitoring program. The monitoring network shall also include any monitoring wells that are installed to comply with Waste Discharge Requirements (see SOIL&WATER-7). Provided access is granted, additional wells located outside of the area defined by the model and Condition A.2 above will be located to serve as background monitoring wells. Abandoned wells, or wells no longer in use, that are accessible and provide reliable water level data within the potentially impacted area may also be included as part of the monitoring network. A site reconnaissance will be performed to identify	The project owner shall do all of the following: At least 30 days in advance of using onsite wells to supply groundwater for Project construction, a Groundwater Monitoring and Reporting Plan shall be submitted to the CPM for review and approval before completion of DF **SOIL&WATER-3** (Well Installation). The Groundwater Monitoring and Reporting Plan shall provide the methodology for monitoring background and site groundwater levels. At least 15 days in advance of using onsite wells to supply groundwater for project construction activities, the project owner shall submit to the CPM, a comprehensive report presenting all the data and information required in item A above. The CPM will provide comments to the plan following submittal. CPM approval of the plan is required prior to operation of the site groundwater supply wells. The project owner shall also submit to the CPM all calculations and assumptions made in development of the report data and interpretations. During project operation, the project owner shall submit to the CPM, applicable quarterly, semi-annual and annual reports presenting all the data and information required in item C above. Quarterly reports shall be submitted to the CPM 30 days following the end of the quarter. The fourth quarter report shall serve as the annual report and will be provided on January 31 in the following year. During project construction, the project owner shall submit to the CPM quarterly reports presenting all the data and information required in item B above. The quarterly reports shall be provided 30 days following the end of the quarter. The project owner shall also submit to the CPM all calculations and assumptions made in development of the report data and interpretations.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Soil and Water Resources (cont.)				
wells that could be accessible for monitoring. As access to these wells is available, historic water level, water quality, well construction and well performance information shall be obtained for both pumping and non-pumping conditions. 4. As access allows, in advance of using onsite wells to supply groundwater for construction activities, groundwater levels will be measured from the off-site and on-site wells within the network and background wells to provide initial groundwater levels for pre-project trend analysis. The installation and monitoring of water levels using pressure transducers shall be done in selected wells to provide an assessment of seasonal trends. 5. Construct water level maps within the PVMGB within the area encompassed by all monitoring wells in A.1, 2, 3 and 4 above prior to construction. As data is available, the Project owner shall prepare trend plots, perform statistical analyses using the Mann-Kendall test (or other CEC-approved statistical analysis method) for trend to assess pre-project water level trends. B. ***During Construction*:** 1. Collect water levels on a quarterly basis throughout the construction period and at the end of the construction period. Perform statistical trend analysis for water levels using the Mann-Kendall test (or other CEC-approved statistical analysis method). Assess the significance of an apparent trend and estimate the magnitude of that trend. C. ***During Operation*:** 1. On a quarterly basis for the first year of operation and semi-annually thereafter for the following four years, collect water level measurements from any wells identified in the groundwater monitoring program to evaluate operational influence from the project. Quarterly operational parameters (i.e., pumping rate) of the water supply wells shall be monitored as access allows for those wells within the monitoring network. Wells outside the network and their influence on pumping within the network shall be evaluated on a quarterly basis to understand well interference from sources of pumping outside the Project area. 2. On an annual basis, perform statistical trend analysis for water levels data and comparison to predicted water level declines due to project pumping. Analysis of the significance of an apparent trend shall be determined and the magnitude of that trend estimated. Pressure transducer data from groundwater level measuring devices will be used to assess seasonality and diurnal trends in the water level data. Based on the results of the statistical trend analyses and comparison to predicted water level declines due to project pumping, the project owner shall determine the area where the project pumping has induced a drawdown in the water supply at a level of five feet or more below the baseline trend. 3. If water levels have been lowered more than five feet below pre-site operational trends, and monitoring data provided by the project owner show these water level changes are different from background trends or other groundwater pumping and are caused by project pumping, then the project owner shall provide mitigation to the impacted well owner(s). Mitigation shall be provided to the impacted well owners that experience 5 feet or more of project-induced drawdown if the CPM's inspection of the well monitoring data confirms changes to water levels and water level trends relative to measured pre-project water levels, and the well (private owners well in question) yield or performance has been significantly affected by project pumping. The type and extent of mitigation shall be determined by the amount of water level decline induced by the project, the type of impact, and site specific well construction and water use characteristics. If an impact is determined to be caused by drawdown from more than one source, the level of mitigation provided shall be proportional to the amount of drawdown induced by the project relative to other sources. In order to be eligible, a well owner must provide documentation of the well location and construction, including pump intake depth, and that the well was constructed and usable before project pumping was initiated. The mitigation of impacts shall be determined as follows: a. If project pumping has lowered water levels by five feet or more and increased pumping lifts, increased energy costs shall be calculated. Payment or reimbursement for the increased costs shall be provided on an annual basis. In the absence of specific electrical use data supplied by the well owner, the project owner shall use **SOIL&WATER-6** to calculate increased energy costs. b. If groundwater monitoring data indicate project pumping has lowered water levels below the top of the well screen, and the well yield is shown to have decreased by 10 percent or more of the pre-project average seasonal yield, compensation shall be provided for the diagnosis and maintenance to treat and remove encrustation from the well screen. Reimbursement shall be provided at an amount equal to the customary local cost of performing the necessary diagnosis and maintenance for well screen encrustation. Should the well yield reductions be recurring, the project owner shall provide payment or reimbursement for periodic maintenance throughout the life of the project. If with treatment the well yield is incapable of meeting 110 percent of the well owner's historic operational maximum daily demand, dry season demand, or annual demand, or the wells sustainable maximum yield demonstrated through well testing, the well owner should be compensated by reimbursement or well replacement as described under 3.c. below. c. If project pumping has lowered water levels to significantly impact well yield so that it can no longer meet its intended purpose, causes the well to go dry, or cause casing collapse, payment or reimbursement of an amount equal to the cost of deepening or replacing the well shall be provided to accommodate these	No later than March 31 of each year of construction or 60 days prior to project operation, the project owner shall provide to the CPM for review and approval, documentation showing that any mitigation to private well owners during project construction was satisfied, based on the requirements of the property owner as determined by the CPM. During project operation, the project owner shall submit to the CPM applicable quarterly, semi-annual and annual reports presenting all the data and information required in item C above. Quarterly reports shall be submitted to the CPM 30 days following the end of the quarter. The fourth quarter report shall serve as the annual report and will be provided on January 31 in the following year. The project owner shall submit to the CPM all calculations and assumptions made in development of report data and interpretations, calculations, and assumptions used in development of any reports.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Soil and Water Resources (cont.)				
effects. Payment or reimbursement shall be at an amount equal to the customary local cost of deepening the existing well or constructing a new well of comparable design and yield (only deeper). The demand for water, which determines the required well yield, shall be determined on a per well basis using well owner interviews, historic well operational records and well testing data, field verification of property conditions and water requirements that are compiled as part of the pre-project well reconnaissance. Well yield shall be considered significantly impacted if it is incapable of meeting 110 percent of the well owner's historical operational maximum daily demand, dry-season demand, or annual demand as documented by the pre-project historical operational records or 100 percent of the maximum sustainable well yield as provided in historic well testing data. If historic well testing data indicates the capacity of the well is higher than the operational data suggests, the well shall be operated for a sufficient period of time acceptable to the CPM, project owner and well owner to demonstrate that its maximum sustainable yield has been impacted solely by the project pumping. If by comparison the well is incapable of meeting 100 percent of the historic maximum sustainable yield demonstrated by the testing, and the reduction in capacity is solely related to the project pumping, the well owner shall be compensated for the lost capacity. Compensation for lost capacity in lieu of well replacement shall be in the form of a lump sum payment equal to the cost of deepening the well to a depth sufficient to return the well yield to its maximum sustainable yield. d. The project owner shall notify any owners of the impacted wells within one month of the CPM approval of the compensation analysis for increased energy costs. e. Pump lowering – In the event that groundwater is lowered as a result of project pumping to an extent where pumps are exposed but well screens remain submerged the pumps shall be lowered to maintain production in the well. The project shall reimburse the impacted well owner for the costs associated with lowering pumping in proportion to the project contribution to the impact. f. Deepening of wells – If the groundwater is lowered enough as a result of project pumping that well screens and/or pump intakes are exposed, and pump lowering is not an option, such affected wells shall be deepened or new wells constructed. The project shall reimburse the impacted well owner for all costs associated with deepening existing wells or construction of a new well in proportion to the project contribution to the impact. 4. After the first five-year operational and monitoring period the CPM shall evaluate the data and determine if the monitoring program for water level measurements should be revised or eliminated. Revision or elimination of any monitoring program elements shall be based on the statistically verifiable datasets and trend analysis. The determination of whether the monitoring program should be revised or eliminated shall be made by the CPM. 5. If mitigation includes monetary compensation, the project owner shall provide documentation to the CPM that compensation payments have been made by March 31 of each year of project operation. Within 30 days after compensation is paid, the project owner shall submit to the CPM a compliance report describing compensation for increased energy costs necessary to comply with the provisions of this Condition. 6. At the end of every subsequent five-year monitoring period, the collected data shall be evaluated by the CPM and they shall determine if the sampling frequency should be revised or eliminated. 7. During the life of the project, the project owner shall provide to the CPM all monitoring reports, complaints, studies and other relevant data within 10 days of being received by the project owner.				
DF SOIL&WATER-6: Where it is determined that the project owner shall reimburse a private well owner for increased energy costs identified as a result of analysis performed in Condition of Certification **SOIL&WATER-5**, the project owner shall calculate the compensation owed to any owner of an impacted well as described below. *Increased cost for energy* = change in lift/total system head x total energy consumption x costs/unit of energy Where: change in lift (ft) = calculated change in water level in the well resulting from project total system head (ft) = elevation head + discharge pressure head elevation head (ft) = difference in elevation between wellhead discharge pressure gauge and water level in well during pumping. discharge pressure head (ft) = pressure at wellhead discharge gauge (psi) X 2.31 The project owner shall submit to the CPM for review and approval the documentation showing which well owners must be compensated for increased energy costs and that the proposed amount is sufficient compensation to comply with the provisions of this Condition. • Any reimbursements to impacted well owners shall be only to those well owners whose wells were in service within six months of the Energy Commission Decision and within the monitoring area predicted by the groundwater modeling Condition A.2. • The project owner shall notify all owners of the impacted wells within one month of the CPM approval of the compensation analysis for increase energy costs.	The project owner shall do all of the following: No later than 30 days after CPM approval of the well drawdown analysis, the project owner shall submit to the CPM for review and approval all documentation and calculations describing necessary compensation for energy costs associated with additional lift requirements. The project owner shall submit to the CPM all calculations, along with any letters signed by the well owners indicating agreement with the calculations, and the name and phone numbers of those well owners that do not agree with the calculations. Compensation payments shall be made by March 31 of each year of project operation. Within 30 days after compensation is paid, the project owner shall submit to the CPM a compliance report describing compensation for increased energy costs necessary to comply with the provisions of this Condition.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Soil and Water Resources (cont.)				
• Compensation shall be provided on an annual basis, as described below. Compensation provided on an annual basis shall be calculated prospectively for each year by estimating energy costs that will be incurred to provide the additional lift required as a result of the project. With the permission of the impacted well owner, the project owner shall provide energy meters for each well or well field affected by the project. The impacted well owner to receive compensation must provide documentation of energy consumption in the form of meter readings or other verification of fuel consumption. For each year after the first year of operation, the project owner shall include an adjustment for any deviations between projected and actual energy costs for the previous calendar year.				
DF SOIL&WATER-7: Waste Discharge Requirements. The project owner shall comply with the requirements specified in **Appendices B, C, and D**. These requirements relate to discharges, or potential discharges, of waste that could affect the quality of waters of the state, and were developed in consultation with staff of the State Water Resources Control Board and/or the applicable California Regional Water Quality Control Board (hereafter "Water Boards"). It is the Commission's intent that these requirements be enforceable by both the Commission and the Water Boards. In furtherance of that objective, the Commission hereby delegates the enforcement of these requirements, and associated monitoring, inspection and annual fee collection authority, to the Water Boards. Accordingly, the Commission and the Water Board shall confer with each other and coordinate, as needed, in the enforcement of the requirements. The project owner shall pay the annual waste discharge permit fee associated with this facility to the Water Boards. In addition, the Water Boards may "prescribe" these requirements as waste discharge requirements pursuant to Water Code Section 13263 solely for the purposes of enforcement, monitoring, inspection, and the assessment of annual fees, consistent with Public Resources Code Section 25531, subdivision (c)	No later than 60 days prior to any wastewater or storm water discharge or use of land treatment units, the project owner shall provide documentation to the CPM, with copies to the CRBRWQCB, demonstrating compliance with the WDRs established in **Appendices B, C, and D**. Any changes to the design, construction, or operation of the evaporation basins, land treatment units, or storm water system shall be requested in writing to the CPM, with copies to the CRBRWQCB, and approved by the CPM, in consultation with the CRBRWQCB, prior to initiation of any changes. The project owner shall provide to the CPM, with copies to the CRBRWQCB, all monitoring reports required by the WDRs, and fully explain any violations, exceedances, enforcement actions, or corrective actions related to construction or operation of the evaporation basins, treatment units, or storm water system.			
DF SOIL&WATER-8: Septic System and Leach Field Requirements. The project owner shall comply with the requirements of the County of Riverside Ordinance Code Title 8, Chapter 8.124 and the California Plumbing Code (California Code of Regulations Title 24, Part 5) regarding sanitary waste disposal facilities such as septic systems and leach fields. The septic system and leach fields shall be designed, operated, and maintained in a manner that ensures no deleterious impact to groundwater or surface water. Compliance shall include an engineering report on the septic system and leach field design, operation, maintenance, and loading impact to groundwater. If it is determined based on the engineering report that groundwater may be impacted, the project owner shall include a groundwater quality monitoring program. This program can utilize monitoring wells (if appropriate) used as part of groundwater monitoring in Condition of Certification **SOIL&WATER-7**. The engineering report will specify the proposed groundwater monitoring program (if required), constituents of concern, monitoring frequency and other elements as needed as part of any groundwater monitoring program.	The project owner shall submit all necessary information and the appropriate fee to the County of Riverside and the CRBRWQCB to ensure that the project has complied with county and state sanitary waste disposal facilities requirements. Written assessments prepared by the County of Riverside and the CRBRWQCB regarding the project's compliance with these requirements must be submitted to the CPM for review and approval 30 days prior to the start of power plant operation.			
DF SOIL&WATER-9: Groundwater Production Reporting. The project is subject to the requirement of Water Code Sections 4999 et. seq. for reporting of groundwater production in excess of 25 acre feet per year.	The project owner shall file an annual "Notice of Extraction and Diversion of Water" with the SWRCB in accordance with Water Code Sections 4999 et. seq. The project Owner shall include a copy of the filing in the annual compliance report.			
DF SOIL&WATER-10: The project owner will prepare both a Provisional Closure Plan and a Final Closure Plan that will meet the requirements of the BLM. The project owner shall identify likely closure scenarios and develop facility closure plans in accordance with **COM-15** "Facility Closure Plans" of the General Conditions. Actions to be taken to avoid or mitigate long-term impacts related to water and wind erosion after the facility's closure need to be identified. Actions may include such measures as a facility closure SWPPP, revegetation and restoration of disturbed areas, post-closure maintenance, collection and disposal of project materials and chemicals, and access restrictions.	One (1) year after initiating commercial operation, the project owner must submit a Provisional Closure Plan and cost estimate for permanent closure to the CPM for review and approval. Three (3) years prior to closing, the owner must submit a Final Closure Plan to the CPM for review and approval. The project owner shall amend these documents as necessary, with approval from the CPM, should the facility closure scenario change in the future.			
DF SOIL&WATER-11: Revised Project Drainage Report and Plans. The project owner shall provide a revised Drainage Report which includes the following additional information: A. A detailed explanation of the large differences in pre- and post-project peak discharges and flood volumes along the downstream (east) project boundary. B. Pre- and post development drainage maps which include the following information: 1. All topographic data used to establish the overall watershed boundaries as well as the sub-basin boundaries. 2. A specific discussion of how the proposed onsite drainage design will protect the facility from erosion. 3. Peak flow values at all downstream points of discharge from the Project. Any other information needed to allow a correlation between the FLO-2D model and the proposed drainage design.	The project owner shall submit a Revised Project Drainage Report with the 30 percent Grading and Drainage Plans to the CPM for their review and comments sixty (60) days before project mobilization. The project owner will address comments provided by the CPM until approval of the report is issued. All comments and concepts presented in the approved Revised Project Drainage Report with the 30 percent Grading and Drainage Plans will be included in the final Grading and Drainage Plans. The Revised Project Drainage Report and 30 percent Grading and Drainage Plans shall be approved by the CPM.			
DF SOIL&WATER-12: Detailed FLO-2D Analysis. The project owner shall provide a detailed hydraulic analysis utilizing FLO-2D which models pre- and post-development flood conditions for the 10-, 25- and 100-year storm events. The methods and results of the analysis shall be fully documented in a Technical Memorandum or in the revised Project Drainage Report. Graphical output must include depth and velocity mapping as well as mapping which graphically shows the changes in both of these parameters between the pre- and post development conditions. Color shading schemes used for the mapping must be consistent between all maps as well as clear and easily differentiated between designated intervals for hydraulic parameters. Intervals to be used in the mapping are as follows: 1. Flow Depth: at 0.20 ft intervals up to 1 ft, and 0.40 ft intervals thereafter.	The project owner shall submit a detailed FLO-2D analysis to the CPM for review and comments with the 30 percent plan Grading and Drainage Plans and revised Project Drainage Report required in **SOIL&WATER-11**. The project owner will address comments provided by the CPM until approval of the analysis is issued.			

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		Initials	Date	Remarks
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2. Velocity: 0.5 ft/s intervals Digital input and output files associated with the FLO-2D analysis must be included with all submittals. The results of this analysis will be used for design of the 30 percent project grading and drainage plans.				
DF SOIL&WATER-13 through DF SOIL&WATER-15 (deleted)				
DF SOIL&WATER-16: Estimation Of Surface Water Impacts. To further assess the impacts from project pumping, the project owner shall estimate the increase in discharge from surface water to groundwater that affects recharge from the Palo Verde Valley Groundwater Basin (USGS) to the Palo Verde Mesa Groundwater Basin (USGS). This estimate may be used for determining the appropriate offset volume in accordance with **SOIL&WATER-2**. The project owner shall do the following to provide an estimate for review and approval by the CPM: 1. The project owner shall conduct a detailed analysis of the contribution of surface water to the PVMGB from the project's groundwater extraction activities at the end of the 30 year operational period. The detailed analysis shall include: a. The conceptual model developed in the AFC and the Staff Assessment, and any changes resultant from further analysis in support of numerical modeling; b. The use of an appropriately calibrated and constructed groundwater flow model of the Palo Verde Valley and Palo Verde Mesa Groundwater Basin, inclusive of the Mesa and floodplain shall include: i. Horizontal and vertical geometry information gained through on- and offsite investigations conducted as part of the hydrogeological field investigations for the AFC, and any subsequently documented investigation performed as part of the model development ; ii. Aquifer properties developed as part of the AFC and any subsequently documented investigations performed as part of the model development, and an assessment of aquifer properties available from other published sources. The properties used shall be representative of the available data, and will be used in calibration of the flow model under ASTM standards and methods.; and	At least 90 days prior to initiation of groundwater pumping for grading activities, the project owner shall submit to the CPM for their review and approval a report detailing the results of the modeling effort. The report shall include the estimated amount of subsurface water flowing from the surface water due to project pumping. This estimate shall be used for determining the appropriate volume of water for mitigation in accordance with **SOIL&WATER-2**.			
iii. The modeling effort shall include a sensitivity analysis where in the most sensitive variables will be identified and varied within a reasonable range outside of the calibration value to provide an assessment of the range of potential impacts from the project pumping on the recharge from the Palo Verde Valley Groundwater Basin to the Palo Verde Mesa Groundwater Basin. c. Reporting of the results of the modeling effort. d. Estimation of the increased contribution of surface water discharge to groundwater and the change in recharge to the Palo Verde Mesa Groundwater Basin attributable to project groundwater pumping. 2. The analysis shall include the following elements: a. The change in groundwater flux to the regional aquifer from surface water sources attributable to project pumping in afy for the life of the project (30 years) until pre-project (within 95 percent) conditions are achieved; b. A sensitivity analysis that would provide a range in the potential changes in flux relative to variation in the key model variables as a result of project pumping for life of the project until pre-project (within 95 percent) conditions are achieved; 3. The project owner shall present the results of the conceptual model, numerical model, transient runs and sensitivity analysis in a report for review and approval by the CPM. The report shall include all pertinent information regarding the development of the numerical models. The report shall include: a. Introduction b. Previous Investigations c. Conceptual Model d. Numerical Model and Input Parameters e. Sensitivity Analysis f. Transient Modeling Runs g. Conclusions				
DF SOIL&WATER-17 and DF SOIL&WATER-18 (deleted)				
DF 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 are designed to accommodate 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.	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.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Soil and Water Resources (cont.)				
The project owner shall ensure that the solar panels, drainage washes that will have solar panels are designed and installed to accommodate 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 panel 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) or other methodologies approved by the CPM* 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" or other similar methodologies approved by the CPM. 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 at pylons to ensure long-term stability under 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 panels to soil resources; • Methods and response time of panel cleanup and measures that may be used to mitigate further impact to soil resources from broken fragments; and • Monitoring, documenting, and restoring the adjacent offsite downstream property when impacted by sedimentation or broken 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 panels. • Adjacent offsite downstream property: Inspect for changes in the surface texture and quality from sediment buildup, erosion, or broken panels.	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 panel. 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.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Soil and Water Resources (cont.)				
Short-Term Incident-Based Response: • Security and Tortoise Exclusion Fence: repair damage, and remove built-up sediment and debris. • Solar panels: Remove broken 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 panels to avoid impacts from broken 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.				
Traffic and Transportation				
DF TRANS-1: Parking and Staging. Prior to start of construction of the BSPP and all related facilities, the project owner shall develop and implement a parking and staging plan for all phases of project construction to ensure that all project-related parking occurs on-site or in designated off-site parking areas.	At least 60 days prior to start of site mobilization, the project owner shall submit the plan to the County of Riverside, City of Blythe, and BLM Operations Manager for review and comment, and to the CPM for review and approval. The requirements outlined in this Condition of Certification shall be coordinated with requirements outlined in DF **TRANS-3**.			
DF TRANS-2: Traffic Control Plan. Prior to start of construction of the Blythe Solar Power Project (BSPP) the project owner shall prepare and implement a Traffic Control Plan (TCP) for the Blythe Solar Power Project construction and operation traffic. The TCP shall address the movement of workers, vehicles, and materials, including arrival and departure schedules, and designated workforce and delivery routes. The project owner shall consult with the County of Riverside and the Department of Transportation (Caltrans) District 8 office in the preparation and implementation of the Traffic Control Plan and shall submit the proposed Traffic Control Plan to the County of Riverside and the Department of Transportation (Caltrans) District 8 office in sufficient time for review and comment and to the Energy Commission Compliance Project Manager (CPM) for review and approval prior to the proposed start of construction and implementation of the plan. The project owner shall provide a copy of any written comments from the County of Riverside and the Department of Transportation (Caltrans) District 8 office and any changes to the Traffic Control Plan to the CPM prior to the proposed start of construction. The Traffic Control Plan shall include: • A work schedule and end-of-shift departure plan designed to ensure that stacking does not occur on intersections necessary to enter and exit the project sites. The project owner shall consider using one or more of the following measures designed to prevent stacking: staggered work shifts, off-peak work schedules as well as restricting travel to and departures from each project site to 10 or fewer vehicles every three minutes during peak travel hours on Interstate 10. • The project owner may use any of the above traffic measures or any other measures if the project owner can demonstrate that the implemented measures would ensure that Interstate 10 operates at a Level of Service (LOS) C or higher during the peak travel hours. • Provisions for an incentive program such as an employer-sponsored Commuter Check Program to encourage construction workers to carpool and/or use van or bus service. • Limitation on truck deliveries to the project sites to only off-peak hours to ensure adequate exit and entry at appropriate intersections. • Provisions for redirection of construction traffic with a flag person as necessary to ensure traffic safety and minimize interruptions to non-construction-related traffic flow. • Placement of signage, lighting, and traffic control device at the project construction site and laydown areas. • Signage along eastbound and westbound appropriate roads and at the entrance of each of the I-10 northbound and southbound off-ramps at appropriate roads notifying drivers of construction traffic throughout the duration of the construction period. • A heavy-haul plan designed to address the transport and delivery of heavy and oversized loads requiring permits from Department of Transportation (Caltrans) or other state and federal agencies.	At least 60 calendar days prior to the start of construction, including any grading or site remediation on the power plant site or its associated easements, the project owner shall submit the proposed traffic control plan to the County of Riverside and the Department of Transportation (Caltrans) District 8 office for review and comment and to the CPM for review and approval. The project owner shall also provide the CPM with a copy of the transmittal letter to the County of Riverside and the Department of Transportation (Caltrans) District 8 office requesting review and comment. At least 30 calendar days prior to the start of construction, the project owner shall provide copies of any comment letters received from either the County of Riverside and the Department of Transportation (Caltrans) District 8 office, along with any changes to the proposed traffic control plan to the CPM for review and approval.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Traffic and Transportation (cont.)				
• Parking for workforce and construction vehicles. • Emergency vehicle access to the project site.				
DF TRANS-3: Limitations on Vehicle Size and Weight. The project owner shall comply with limitations imposed by Caltrans District 8 office and other relevant jurisdictions including County of Riverside and City of Blythe on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for use of roadways.	At least 30 calendar days prior to the start of construction, the project owner shall provide copies of permits obtained from either the County of Riverside or the Caltrans District 8 office to the CPM. In the Monthly Compliance Reports (MCRs), the project owner shall submit copies of any permits received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.			
DF TRANS-4: Encroachment into Public Rights of Way. The project owner or its contractor shall comply with Caltrans and other relevant jurisdictions' limitations for encroachment into public rights-of-way and shall obtain necessary encroachment permits from Caltrans and all relevant jurisdictions.	In the monthly compliance reports (MCRs), the project owner shall submit copies of permits received during the reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.			
DF TRANS-5: Restoration of All Public Roads, Easements, and Rights-of-Way. The project owner shall restore all public roads, easements, and rights-of-way that have been damaged due to project-related construction activities to original or near-original condition in a timely manner, as directed by the CPM, in consultation with the County of Riverside. Repairs and restoration of access roads may be required at any time during the construction phase of the project to assure public safety. Prior to the start of site mobilization, the project owner shall consult with the County of Riverside and Caltrans District 8 and notify them of the proposed schedule for project construction. The purpose of this notification is to request that the County of Riverside and Caltrans consider postponement of public right-of-way repair or improvement activities in areas affected by project construction until construction is completed and to coordinate with the project owner regarding any concurrent construction-related activities that are planned or in progress and cannot be postponed.	At least 30 days prior to the start of mobilization, the project owner shall photograph or videotape all affected public roads, easements, and right-of-way segments and/or intersections and shall provide the CPM, the affected local jurisdictions and Caltrans (if applicable) with a copy of these images. The project owner shall rebuild, repair and maintain all public roads, easements, rights-of-way in a usable condition throughout the construction phase of the project. Within 60 calendar days after completion of construction, the project owner shall meet with the CPM, the County of Riverside and Caltrans District 8 to identify sections of public right-of-way to be repaired. At that time, the project owner shall establish a schedule to complete the repairs and to receive approval for the action(s). Following completion of any public right-of-way repairs, the project owner shall provide a letter signed by the County of Riverside and Caltrans District 8 stating their satisfaction with the repairs to the CPM.			
DF TRANS-6: Securing Permits/Licenses to Transport Hazardous Materials. The project owner shall ensure that permits and/or licenses are secured from the California Highway Patrol and Caltrans for the transport of hazardous materials.	The project owner shall include in its Monthly Compliance Reports, copies of all permits/licenses acquired by the project owner and/or subcontractors concerning the transport of hazardous substances.			
DF TRANS-7 (Deleted)				
DF TRANS-8: Prior to the start of operation of any phase of the project, the project owner shall prepare an Avigation Easement in accordance with Appendix D of the California Airport Land Use Planning Handbook and have it signed by the Bureau of Land Management.	At least 60 days prior to the start of construction, the project owner shall submit a BLM-signed avigation easement to the CPM for review and approval. Once approved by the CPM, applicant shall send the Avigation Easement to the Riverside County Land Use Commission staff for review and recording purposes. Once recorded, applicant shall send a copy of the recorded document to the CPM.			
DF TRANS-9 (Deleted)				
DF TRANS-10: Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related glare complaints. The project owner or authorized agent shall: • Use the Complaint Resolution Form (below), or functionally equivalent procedure acceptable to the CPM, to document and respond to each complaint. • Attempt to contact the person or persons making the complaint within 24 hours. If not contacted within 24 hours, attempt to contact the person or persons for a reasonable time period, to be determined by the CPM. • Conduct an investigation to determine the source of glare related to the complaint. • If the glare is project related, take all feasible measures to reduce the glare at its source. As soon as the complaint has been resolved to the complainant's satisfaction, submit to the CPM a report in which the complaint as well as the actions taken to resolve the complaint are documented. The report shall include (1) a complaint summary, including the name and address of the complainant; (2) final results of glare reduction efforts; and (3) a signed statement by the complainant, if obtainable, in which complainant states that the glare problem is resolved to his or her satisfaction.	Within five business days of receiving a glare complaint, the project owner shall file with the City of Blythe Development Services Department, the Riverside County Planning Department, and the CPM a copy of the Glare Complaint Resolution Form, documenting the resolution of the complaint. If mitigation is required to resolve a complaint and the complaint is not resolved within three business days, the project owner shall submit an updated Glare Complaint Resolution Form when the mitigation is implemented.			
DF TRANS-11: Prior to the start of construction of the transmission line, the project owner shall submit a plan identifying measures to be taken to mark and light the lines and poles beneath runway approaches, typical pattern entry corridors, and typical departure routes pursuant to criteria included in FAAC 70/7460-1K. The plan shall identify the number and location of poles that are subject to the criteria and the exact measures to be taken to properly mark and light the poles in conformance with FAAC 70/7460.	At least 30 days prior to the start of transmission line mobilization, the project owner shall provide a construction plan for review and approval. Once the plan has been approved and implemented, the project owner shall provide documentation showing completion of the transmission line, including the required marking and lighting measures.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Traffic and Transportation (cont.)				
DF TRANS-12: The project owner shall use textured glass or anti-reflective coating on all photovoltaic (PV) solar panels.	At least 30 days prior to construction of PV panels, the project owner shall provide documentation that textured glass or anti-reflective coating will be used on all PV solar panels.			
DF TRANS-13: The project owner shall construct all exposed PV panel support structures with matte or non-reflective surfaces.	At least 30 days prior to installation of PV panel supports, the project owner shall provide documentation showing that matte or non-reflective surfaces will be used on all PV panel support structures. matt or burnished surfaces on all PV solar panels.			
Visual Resources				
MM BLM-VIS-1: The project owner shall paint visible converters and other vertical construction shadow gray as shown on the BLM Color Chart. To the extent feasible, the backs of visible solar panels shall also be color treated to minimize color contrasts. BLM-VIS-1 may not be imposed where views of the backs of solar panels could not be visible outside the facility due to fences and other intervening structures or obstructions.	See DF VIS-1, below.			
DF VIS-1: Surface Treatment of Project Structures and Buildings. The project owner shall treat the surfaces of all project structures and buildings visible to the public such that: a) their colors minimize visual intrusion and contrast by blending with (matching) the existing characteristic landscape colors; b) their colors and finishes do not create excessive glare; and (c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non- specular and non-reflective, and the insulators shall be non-reflective and non-refractive. Following in-field consultation with the Energy Commission/BLM Visual Resources specialist and other representatives as deemed necessary, the project owner shall submit for Compliance Project Manager (CPM) review and approval, a specific Surface Treatment Plan that will satisfy these requirements. The treatment plan shall include: A A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes based on the characteristic landscape. Colors will be field tested using the actual distances from the KOPs to the proposed structures, using the proposed colors painted on representative surfaces; B A list of each major project structure, building, tank, pipe, and wall; the transmission line towers and/or poles; and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, and pantone number; or according to a universal designation system; C One set of color brochures or color chips showing each proposed color and finish; D A specific schedule for completion of the treatment; and E A procedure to ensure proper treatment maintenance for the life of the project. The project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated in the field, until the project owner receives notification of approval of the treatment plan by the CPM. Subsequent modifications to the treatment plan are prohibited without CPM approval.	At least 90 days prior to specifying to the vendor the colors and finishes of the first structures or buildings that are surface treated during manufacture, the project owner shall submit the proposed treatment plan to the CPM for review and approval and simultaneously to Riverside County for review and comment. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a plan with the specified revision(s) for review and approval by the CPM before any treatment is applied. Any modifications to the treatment plan must be submitted to the CPM for approval. Prior to the start of commercial operation, the project owner shall notify the CPM that surface treatment of all listed structures and buildings has been completed and they are ready for inspection and shall submit to each one set of electronic color photographs from the project KOPs. The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report. The report shall specify a): the condition of the surfaces of all structures and buildings at the end of the reporting year; b) maintenance activities that occurred during the reporting year; and c) the schedule of major maintenance activities for the next year.			
DF VIS-2: Revegetation of Disturbed Soil Areas. The project owner shall revegetate disturbed soil areas to the greatest practical extent, as described in Condition of Certification **BIO-8**. In order to address specifically visual concerns, the required closure, Revegetation and Rehabilitation Plan shall include reclamation of the area of disturbed soils used for laydown, project construction, and siting of the other ancillary operation and support structures.	Refer to DF **BIO-8**.			
DF VIS-3: Temporary and Permanent Exterior Lighting. To the extent feasible, consistent with safety and security considerations, the project owner shall design and install all permanent exterior lighting and all temporary construction lighting such that a) lamps and reflectors are not visible from beyond the project site, including any off-site security buffer areas; b) lighting does not cause excessive reflected glare; c) direct lighting does not illuminate the nighttime sky, except for required FAA aircraft safety lighting d) illumination of the project and its immediate vicinity is minimized, and e) the plan complies with local policies and ordinances. The project owner shall submit to the CPM for review and approval and simultaneously to the County of Riverside for review and comment a lighting mitigation plan that includes the following: A. Location and direction of light fixtures shall take the lighting mitigation requirements into account; B. Lighting design shall consider setbacks of project features from the site boundary to aid in satisfying the lighting mitigation requirements; C. Lighting shall incorporate fixture hoods/shielding, with light directed downward or toward the area to be illuminated; D. Light fixtures that are visible from beyond the project boundary shall have cutoff angles that are sufficient to prevent lamps and reflectors from being visible beyond the project boundary, except where necessary for security; E. All lighting shall be of minimum necessary brightness consistent with operational safety and security; and F. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied.	At least 90 days prior to ordering any permanent exterior lighting or temporary construction lighting, the project owner shall contact the CPM to discuss the documentation required in the lighting mitigation plan. At least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and approval and simultaneously to the County of Riverside for review and comment a lighting mitigation plan. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a revised plan for review and approval by the CPM. The project owner shall not order any exterior lighting until receiving CPM approval of the lighting mitigation plan. Prior to commercial operation, the project owner shall notify the CPM that the lighting has been completed and is ready for inspection. If after inspection, the CPM notifies the project owner that modifications to the lighting are needed, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed and are ready for inspection. Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the Compliance General Conditions including a proposal to resolve the complaint, and a schedule for implementation. The project owner shall notify the CPM within 48 hours after completing implementation of the proposal. A copy of the complaint resolution form report shall be submitted to the CPM within 30 days.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Visual Resources (cont.)				
DF VIS-4: Project Design. To the extent possible, the project owner will use proper design fundamentals to reduce the visual contrast to the characteristic landscape. These include proper siting and location; reduction of visibility; repetition of form, line, color (see **VIS-1**) and texture of the landscape; and reduction of unnecessary disturbance. Design strategies to address these fundamentals will be based on the following factors: **Earthwork:** Select locations and alignments that fit into the landforms to minimize the size of cuts and fills. Avoid hauling in or hauling out of excess earth cut or fill. Avoid rounding and/or warping slopes. Retain existing rock formations, vegetation, and drainage. Tone down freshly broken rock faces with emulsions or stains. Use retaining walls to reduce the amount and extent of earthwork. Retain existing vegetation by using retaining walls or fill slopes, reducing surface disturbance, and protecting roots from damage during excavations. Avoid soil types that generate strong color contrasts. Reduce dumping or sloughing of excess earth and rock on downhill slopes. **Vegetation Manipulation:** Retain as much of the existing vegetation as possible. Use existing vegetation to screen the development from public viewing. Use scalloped, irregular cleared edges to reduce line contrast. Use irregular clearing shapes to reduce form contrast. Feather and thin the edges of cleared areas and retain a representative mix of plant species and sizes. **Structures:** Minimize the number of structures and combine different activities in one structure. Use natural, self-weathering materials and chemical treatments on surfaces to reduce color contrast. Bury all or part of the structure. Use natural appearing forms to complement the characteristic landscape. Screen the structure from view by using natural land forms and vegetation. Reduce the line contrast created by straight edges. **Linear Alignments:** Use existing topography to hide induced changes associated with roads, lines, and other linear features. Select alignments that follow landscape contours. Avoid fall-line cuts and bisecting ridge tops. Hug vegetation lines and avoid open areas such as valley bottoms. Cross highway corridors at less sharp angles. **Reclamation and Restoration:** Reduce the amount of disturbed area and blend the disturbed areas into the characteristic landscape. Replace soil, brush, rocks, and natural debris over disturbed area. Newly introduced plant species should be of a form, color, and texture that blends with the landscape.	As early as possible in the site and facility design, the project owner shall meet with BLM's Authorized Office and the CPM to discuss incorporation of these above factors into the design plans. At least 90 days prior to final site and facility design, the project owner shall contact the CPM to review the incorporation of the above factors into the final facility and site design plans. If the CPM determines that the site and facility plans require revision, the project owner shall provide to the CPM a revised plan for review and approval by the CPM.			
Waste Management				
DF WASTE-1: The project owner shall prepare a UXO Identification, Training and Reporting Plan to properly train all site workers in the recognition, avoidance and reporting of military waste debris and ordnance. The project owner shall submit the plan to the CPM for review and approval prior to the start of construction. The plan shall contain, at a minimum, the following: 1. A description of the training program outline and materials, and the qualifications of the trainers; and 2. Identification of available trained experts that will respond to notification of discovery of any ordnance (unexploded or not); and 3. Work plan to recover and remove discovered ordnance, and complete additional field screening, possibly including geophysical surveys to investigate adjacent areas for surface, near surface or buried ordnance in all proposed land disturbance areas. The project owner shall provide documentation of the plan and provide survey results to the CPM.	The project owner shall submit the UXO Identification, Training and Reporting Plan to the CPM for approval no less than 30 days prior to the initiation of construction activities at the site. The results of geophysical surveys shall be submitted to the CPM within 30 days of completion of the surveys.			
DF WASTE-2: The project owner shall provide the résumé of an experienced and qualified Professional Engineer or Professional Geologist to the CPM for review and approval. The résumé shall show experience in remedial investigation and feasibility studies. This Professional Engineer or Professional Geologist shall be available during site characterization (if needed), excavation, grading, and demolition activities. The Professional Engineer or Professional Geologist shall be given authority by the project owner to oversee any earth-moving activities that have the potential to disturb contaminated soil and impact public health, safety, and the environment.	At least 30 days prior to the start of site mobilization the project owner shall submit the resume to the CPM for review and approval.			
DF WASTE-3: If potentially contaminated soil is identified during site characterization, excavation, grading, or demolition at either the proposed site or linear facilities—as evidenced by discoloration, odor, detection by handheld instruments, or other signs—the Professional Engineer or Professional Geologist shall inspect the site; determine the need for sampling to confirm the nature and extent of contamination; and provide a written report to the project owner, representatives of Department of Toxic Substances Control (DTSC) or Regional Water Quality Control Board (RWQCB), the CPM stating the recommended course of action. Depending on the nature and extent of contamination, the Professional Engineer or Professional Geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If in the opinion of the Professional Engineer or Professional Geologist significant remediation may be required, the project owner shall contact the CPM, and representatives of the DTSC or RWQCB for guidance and possible oversight.	The project owner shall submit any reports filed by the Professional Engineer or Professional Geologist to the CPM within 5 days of their receipt. The project owner shall notify the CPM within 24 hours of any orders issued to halt construction.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Waste Management (cont.)				
DF WASTE-4: The project owner shall submit a Construction Waste Management Plan to the CPM for review and approval prior to the start of construction. The plan shall contain, at a minimum, the following: • a description of all construction waste streams, including projections of frequency, amounts generated and hazard classifications; • a survey of structures to be demolished that identifies the types of waste to be managed; and • management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods, and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/reduction plans.	The project owner shall submit the Construction Waste Management Plan to the CPM for approval no less than 30 days prior to the initiation of construction activities at the site.			
DF WASTE-5: The project owner shall obtain a hazardous waste generator identification number from the United States Environmental Protection Agency (USEPA) prior to generating any hazardous waste during project construction and operations.	The project owner shall keep a copy of the identification number on file at the project site and provide documentation of the hazardous waste generation and notification and receipt of the number to the CPM in the next scheduled Monthly Compliance Report after receipt of the number. Submittal of the notification and issued number documentation to the CPM is only needed once unless there is a change in ownership, operation, waste generation, or waste characteristics that requires a new notification to USEPA. Documentation of any new or revised hazardous waste generation notifications or changes in identification number shall be provided to the CPM in the next scheduled compliance report.			
DF WASTE-6: Upon notification of any impending waste management-related enforcement action related to project site activities by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts for the project, and describe the owner's response to the impending action or if a violation has been found, how the violation will be corrected.	The project owner shall notify the CPM in writing within 10 days of receiving written notice from authorities of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the way project-related wastes are managed as a result of a finalized action against the project.			
DF WASTE-7: The project owner shall submit the Operation Waste Management Plan to the CPM for review and approval. The plan shall contain, at a minimum, the following: • a detailed description of all operation and maintenance waste streams, including projections of amounts to be generated, frequency of generation, and waste hazard classifications; • management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to ensure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans; • information and summary records of conversations with the local Certified Unified Program Agency and the Department of Toxic Substances Control regarding any waste management requirements necessary for project activities. Copies of all required waste management permits, notices, and/or authorizations shall be included in the plan and updated as necessary; • a detailed description of how facility wastes will be managed and any contingency plans to be employed, in the event of an unplanned closure or planned temporary facility closure; and • a detailed description of how facility wastes will be managed and disposed upon closure of the facility.	The project owner shall submit the Operation Waste Management Plan to the CPM for approval no fewer than 30 days prior to the start of project operation. The project owner shall submit any required revisions to the CPM within 20 days of notification from the CPM that revisions are necessary. The project owner shall also document in each Annual Compliance Report the actual volume of wastes generated and the waste management methods used during the year, provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste Management Plan, and update the Operation Waste Management Plan as necessary to address current waste generation and management practices.			
DF WASTE-8 (Deleted)				
DF WASTE-9: The project owner shall ensure that all accidental spills or unauthorized releases of hazardous substances, hazardous materials, and hazardous waste are documented and remediated, and that wastes generated from accidental spills and unauthorized releases are properly managed and disposed of in accordance with all applicable federal, state, and local requirements. For the purpose of this Condition of Certification, "release" shall have the definition in Title 40 of the Code of Federal Regulations, Part 302.3. The project owner shall document management of all accidental spills and unauthorized releases of hazardous substances, hazardous materials, and hazardous wastes that occur on the project property or related linear facilities. The documentation shall include, at a minimum, the following information: location of release; date and time of release; reason for release; volume released; how release was managed and material cleaned up; amount of contaminated soil and/or cleanup wastes generated; if the release was reported; to whom the release was reported; release corrective action and cleanup requirements placed by regulating agencies; level of cleanup achieved and actions taken to prevent a similar release or spill; and disposition of any hazardous wastes and/or contaminated soils and materials that may have been generated by the release.	A copy of the accidental spill or unauthorized release documentation shall be provided to the CPM within 30 days of the date the release was discovered.			
DF WASTE-10: The project owner shall ensure that all non-hazardous, non-recyclable, and non-reusable construction and operation waste is not diverted to Desert Center Landfill or Mecca II Landfill.	The project owner shall document all project-related solid waste disposal actions to the Compliance Project Manager annually.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Worker Safety				
DF WORKER SAFETY-1: The project owner shall submit to the Compliance Project Manager (CPM) a copy of the Project Construction Safety and Health Program containing the following: • A Construction Personal Protective Equipment Program; • A Construction Exposure Monitoring Program; • A Construction Injury and Illness Prevention Program; • A Construction heat stress protection plan that implements and expands on existing Cal OSHA regulations as found in 8 CCR 3395; • A Construction Emergency Action Plan; • A Construction Flood Safety Plan; and • A Construction Fire Prevention Plan. The Personal Protective Equipment Program, the Exposure Monitoring Program, the Injury and Illness Prevention Program, the Construction Flood Safety Plan, and the Heat Stress Protection Plan shall be submitted to the CPM for review and approval concerning compliance of the program with all applicable safety orders. The Construction Emergency Action Plan and the Fire Prevention Plan shall be submitted to the Riverside County Fire Department for review and comment prior to submittal to the CPM for approval.	At least 30 days prior to the start of construction, the project owner shall submit to the CPM for review and approval a copy of the Project Construction Safety and Health Program.			
DF WORKER SAFETY-2: The project owner shall submit to the CPM a copy of the Project Operations and Maintenance Safety and Health Program containing the following: • An Operation Injury and Illness Prevention Plan; • An Operation heat stress protection plan that implements and expands on existing Cal OSHA regulations (8 CCR 3395); • A Best Management Practices (BMP) for the storage and application of herbicides; • An Emergency Action Plan that includes safety measures, engineering controls, and BMPs to address potential electrical shock hazards in the event of fire; • Hazardous Materials Management Program; • Fire Prevention Plan; • An Operations Flood Safety Plan; and • Personal Protective Equipment Program (8 Cal Code Regs, §§ 3401-3411). • The Operation Injury and Illness Prevention Plan, Emergency Action Plan, Heat Stress Protection Plan, BMP for Herbicides, and Personal Protective Equipment, an Operations Flood Safety Plan, and Personal Protective Equipment Program shall be submitted to the CPM for review and comment concerning compliance of the programs with all applicable safety orders. The Fire Prevention Plan and the Emergency Action Plan shall also be submitted to the Riverside County Fire Department for review and comment.	At least 30 days prior to the start of first-fire or commissioning, the project owner shall submit to the CPM for approval a copy of the Project Operations and Maintenance Safety and Health Program.			
DF WORKER SAFETY-3: The project owner shall provide a site Construction Safety Supervisor (CSS) who, by way of training and/or experience, is knowledgeable of power plant construction activities and relevant laws, ordinances, regulations, and standards; is capable of identifying workplace hazards relating to the construction activities; and has authority to take appropriate action to assure compliance and mitigate hazards. The CSS shall: • Have overall authority for coordination and implementation of all occupational safety and health practices, policies, and programs; • Assure that the safety program for the project complies with Cal/OSHA and federal regulations related to power plant projects; • Assure that all construction and commissioning workers and supervisors receive adequate safety training; • Complete accident and safety-related incident investigations and emergency response reports for injuries and inform the CPM of safety-related incidents; and • Assure that all the plans identified in Conditions of Certification Worker Safety-1 and -2 are implemented. The CSS shall submit in the Monthly Compliance Report a monthly safety inspection report to include: • Record of all employees trained for that month (all records shall be kept on site for the duration of the project); • Summary report of safety management actions and safety-related incidents that occurred during the month; • Report of any continuing or unresolved situations and incidents that may pose danger to life or health; and • Report of accidents and injuries that occurred during the month.	At least 60 days prior to the start of site mobilization, the project owner shall submit to the CPM the name and contact information for the Construction Safety Supervisor (CSS). The contact information of any replacement CSS shall be submitted to the CPM within one business day.			

Mitigation Measure (MM) or Design Feature (DF)	Compliance Action, Timing for Implementation, Monitoring Agency(ies)	Verification of Compliance		
		Initials	Date	Remarks
Worker Safety (cont.)				
DF WORKER SAFETY-4: The project owner shall make payments to the Chief Building Official (CBO) for the services of a Safety Monitor based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. Those services shall be in addition to other work performed by the CBO. The Safety Monitor shall be selected by and report directly to the CBO and will be responsible for verifying that the Construction Safety Supervisor, as required in Condition of Certification **Worker Safety-3**, implements all appropriate Cal/OSHA and Energy Commission safety requirements. The Safety Monitor shall conduct on-site (including linear facilities) safety inspections at intervals necessary to fulfill those responsibilities.	At least 60 days prior to the start of construction, the project owner shall provide proof of its agreement to fund the Safety Monitor services to the CPM for review and approval.			
DF WORKER SAFETY-5: The project owner shall ensure that a portable automatic external defibrillator (AED) is located on site during construction and operations and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times. During construction and commissioning, the following persons shall be trained in its use and shall be on site whenever the workers that they supervise are on site: the Construction Project Manager or delegate, the Construction Safety Supervisor or delegate, and all shift foremen. During operations, all power plant employees shall be trained in its use. The training program shall be submitted to the CPM for review and approval.	At least 60 days prior to the start of site mobilization, the project owner shall submit to the CPM proof that a portable automatic external defibrillator (AED) exists on site and a copy of the training and maintenance program for review and approval.			
DF WORKER SAFETY-6 The project owner shall: a. Provide a second access gate for emergency personnel to enter the site. This secondary access gate shall be at least one-quarter mile from the main gate. b. Maintain the main access road and provide a plan for implementation. Plans for the secondary access gate, the method of gate operation, and to maintain the road shall be submitted to the Riverside County Fire Department for review and comment and to the CPM for review and approval.	At least sixty (60) days prior to the start of site mobilization, the project owner shall submit to the Riverside County Fire Department and the CPM preliminary plans showing the location of a second access gate to the site, a description of how the gate will be opened by the fire department, and a description and map showing the location, dimensions, and composition of the main road. At least thirty (30) days prior to the start of site mobilization, the project owner shall submit final plans plus the road maintenance plan to the CPM review and approval. The final plan submittal shall also include a letter containing comments from the Riverside County Fire Department or a statement that no comments were received.			
DF WORKER SAFETY-7: The project owner shall fund its share of capital costs in the amount of $250,000 and provide an annual payment of $100,000 to the RCFD for the support of construction, operations and maintenance commencing with the start of 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.	Not less than fifteen (15) days after the start of site mobilization, the project owner shall provide to the CPM documentation that the amount of $250,000 has been paid to the RCFD, documentation that the first annual payment of $100,000 has been 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.			
DF WORKER SAFETY-8: The project owner shall develop and implement an enhanced Dust Control Plan that includes the requirements described in **AQ-SC3** and additionally requires: i. Site worker use of dust masks (NIOSH N-95 or better) whenever visible dust is present; ii. Implementation of enhanced dust control methods (increased frequency of watering, use of dust suppression chemicals, etc. consistent with **AQ-SC4**) immediately whenever visible dust comes from or onto the site.	At least 60 days prior to the commencement of site mobilization, the enhanced Dust control Plan shall be provided to the CPM for review and approval.			
DF WORKER SAFETY-9: The project owner shall submit to the Riverside County Fire Department (RCFD) all plans and schematic diagrams that show the details of all fire detection and suppression systems and shall pay the RCFD its usual and customary fee for the review of those plans and inspection of the site to ensure compliance with those plans. The project owner shall provide proof to the CPM that the plans have been submitted to the RCFD on a timely basis and a copy of the comments received from the RCFD.	In each Monthly Compliance Report during construction, the project owner shall include any and all comments received from the RCFD on fire detection and suppression systems and proof that the required plan review and inspection fees have been paid to the fire department. During operation, the project owner shall provide proof in the Annual Compliance Report that the required inspection fees have been paid to the fire department.			
DF WORKER SAFETY-10: The project owner shall report to the CPM within 24 hours of any incidence of heat illness (heat stress, exhaustion, stroke, or prostration) occurring in any worker on-site and shall report to the CPM the incidence of any confirmed case of Valley Fever in any worker on the site within 24 hours of receipt of medical diagnosis.	The project owner shall provide reports of heat-related and Valley Fever incidences in any worker on the site via telephone call or e-mail to the CPM within 24 hours of a heat-related occurrence or confirmed diagnosis of a case of Valley Fever, and shall include such reports in the Monthly Compliance Report during construction and the Annual Compliance Report during operation.			

APPENDIX 6

Environmental Construction and Compliance Monitoring Program

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MODIFIED BLYTHE SOLAR POWER PROJECT

Environmental Construction Compliance Monitoring Program

CACA-048811

For:

Palm Springs-South Coast Field Office

Palm Springs, California

July 2014

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Acronyms and Abbreviations

AO	Authorized Officer
BLM	United States Bureau of Land Management
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
PM	Project Manager (BLM)
CPM	Compliance Project Manager (BLM)
CMO	Compliance Monitors (third-party)
CM	Compliance Manager (third-party)
ECCMP	Environmental Construction Compliance Monitoring Program
EC	Environmental Compliance
FEIS	Final Environmental Impact Statement
FLPMA	Federal Land Policy Management Act
LORS	laws, ordinances, regulations, and standards
BSPP	Blythe Solar Power Project
MW	Megawatt
BSCM	NextEra Blythe Solar LLC Compliance Manager
BSEM	NextEra Blythe Solar LLC Environmental Monitors
BSPM	NextEra Blythe Solar LLC Project Managers
NTP	Notice to Proceed
POD	Plan of Development
ROD	Record of Decision
ROW	right-of-way
SWPPP	Storm Water Pollution Prevention Plan
USFWS	United States Fish and Wildlife Services

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1.0 Introduction

1.1 Purpose of this Report

This report presents the objectives of the United States Bureau of Land Management (BLM) Environmental Construction Compliance Monitoring Program (ECCMP) for the Modified Blythe Solar Power Project (Modified BSPP). This report:

- Describes the responsibilities of the third-party contractor hired to implement the ECCMP on behalf of the BLM (referred to in this report as the Monitoring Contractor);
- Outlines the level of effort anticipated from the Monitoring Contractor in implementing the ECCMP;
- Defines the communication protocol to be followed by the Monitoring Contractor, NextEra Blythe Solar, LLC, and BLM;
- Defines the variance request process and Monitoring Contractor role in processing variance requests;
- Describes the monitoring, reporting, and documentation requirements, and adaptive management processes during construction;
- Defines the decision-making authority of the Monitoring Contractor; and
- Describes participation by the Monitoring Contractor in NextEra Blythe Solar, LLC's Environmental Training Program.

The BLM requires holders of right-of-way (ROW) grants to prepare and fund an environmental compliance monitoring program to ensure compliance with the BLM terms, conditions, and stipulations in the ROW Grants, the Plan of Development (POD), and other project-specific mitigation, terms, and conditions (listed in detail in Chapter 2.0, Objectives of the Environmental Construction Compliance Monitoring Program).

This report also discusses the monitoring reporting and documentation requirements, communication protocol, stop work authority, and the variance process.

1.2 Memorandum of Understanding with the California Energy Commission

In 2007, the BLM and the California Energy Commission (CEC) formalized a Memorandum of Understanding (MOU) for the joint environmental review of solar thermal power plant projects to be located on public lands. In September 2010, that MOU was amended to ensure that the BLM

and CEC "…share in construction compliance, environmental compliance, design review, plan check, and construction, maintenance, operation and termination inspection (collectively "compliance review") of solar thermal power plant projects on public lands, to avoid duplication of staff efforts, to share staff expertise and information, to promote intergovernmental coordination at the state and Federal levels, to develop a more efficient compliance review process, and to meet state and Federal requirements." The MOU amendment is provided in Attachment J, Amendment to the 2007 Memorandum of Understanding.

Section 25500.1 of the California Public Resources Code authorizes the CEC to review amendments to convert proposed solar thermal power plants, approved by the CEC and sited on federal land, to the use of PV technology. Section 25500.1(d) requires the CEC to use its amendment process under Section 1769 of Title 20 of the California Code of Regulations. NextEra Blythe Solar, LLC submitted a Revised Petition for Amendment on April 11, 2013 to modify the existing CEC approval. In October 2013, CEC staff issued Requests for Comments on its analysis of potential CEQA effects of the Modified Project and then, on January 21, 2014, issued a Commission Decision granting the Petition to Amend and a certificate to construct and operate the Modified Project (CEC, 2014a) and notice of the decision (CEC, 2014b). The BLM anticipates that additional coordination with the CEC will occur as appropriate during the compliance monitoring phase of the project.

2.0 Objectives of the Environmental Construction Compliance Monitoring Program

The overall objective of the ECCMP for the Modified BSPP is to conduct monitoring of construction activities, evaluate compliance or noncompliance with the project measures and conditions during project construction, and document that compliance or noncompliance. This ECCMP specifically focuses on the construction phase of the Modified BSPP. A similar program with phase-specific measures and conditions may be developed and implemented during the project operation and decommissioning phases. The third-party contractor hired to implement the ECCMP on behalf of the BLM, referred to in this report as the Monitoring Contractor, will provide a Compliance Manager and on-the-ground Compliance Monitors to meet this objective.

The environmental mitigation requirements for the Modified BSPP comprise the following:

- Approved mitigation measures and project design features (refer to Appendix 4 of the Record of Decision [ROD]) and other measures documented in the Final Environmental Impact Statement (FEIS);
- Terms, conditions, and stipulations in the BLM ROD, Amended ROW Grant, and Notices to Proceed (NTPs) for the project;
- Construction procedures in the approved POD for the project;
- Stipulations, terms, conditions, and other measures from other authorizing Federal agencies' permits and approvals, specifically the United States Fish and Wildlife Service (USFWS) Biological Opinion; and
- Stipulations, terms, conditions, and other measures from State and regional agencies' permits and approvals, including the California Department of Fish and Wildlife (CDFW).

During construction of the Modified BSPP, the NextEra Blythe Solar, LLC Environmental Compliance Team will conduct monitoring of construction activities and the implementation of the required mitigation measures, and will provide regular feedback through the Construction Monitors (CMOs) to the Compliance Manager (CM) on compliance issues to the BLM. The Compliance Monitors will report directly to the Compliance Manager. The Compliance Manager will report directly to the BLM Project

Manager (PM), BLM Compliance Project Manager (CPM), or BLM Authorized Officer (AO) and other identified compliance contacts, as directed by the BLM. The Monitoring Contractor will involve other agencies such as USFWS or CDFW in the monitoring and documenting of environmental compliance to the extent requested by those agencies, NextEra Blythe Solar, LLC and authorized by the BLM. Construction progress and environmental compliance will be tracked and documented in logs and weekly reports prepared and submitted as described in detail later in Section 5.0, Reporting and Documentation.

Other objectives of the ECCMP are to:

- Facilitate the timely resolution of compliance-related issues in the field
- Provide continuous information to the BLM and other agencies and parties as authorized regarding noncompliance issues and their resolution
- Review, process, and track construction-related changes to project plans (the Monitoring Contractor will assist with implementation of the variance process in accordance with Section 6.0, Variances)
- Develop and implement a system for storing the information collected during the ECCMP in a format that will allow easy retrieval and search functions.

In order to ensure the ECCMP remains applicable to changing site-specific conditions throughout project development, the ECCMP is a dynamic plan and may be modified at any juncture of the Modified BSPP lifecycle. Modifications to the document may be requested by NextEra Blythe Solar, LLC or the BLM. Ultimate approval of any modifications to the plan will be made by the BLM AO.

3.0 Environmental Compliance Monitoring and Management

3.1 Construction Plan

NextEra Blythe Solar, LLC is the current owner and holder of a right-of-way (ROW) grant (CACA-048811) that the Bureau of Land Management (BLM) issued for the BSPP on November 4, 2010. The BLM analyzed and approved a ROW grant for the development of the BSPP as a 1,000-megawatt (MW) solar energy generating plant utilizing thermal parabolic trough solar generating technology on 6,831 acres of public land located near the City of Blythe in Riverside County, California, on October 22, 2010. On June 21, 2013, NextEra Blythe Solar, LLC submitted a Level 3 variance request pursuant to the Record of Decision (2010 ROD) to amend the ROW grant to convert the BSPP to photovoltaic (PV) technology, reduce the size of the overall solar plant site, and reconfigure the solar plant site to allow transmission and access road corridors through the BSPP site for shared use with other approved and proposed projects (the Modified BSPP).

The Modified BSPP is expected to be constructed over approximately 48 months. The Modified BSPP would include the construction and operation of an up to 485-megawatt (MW) facility consisting of four units (3 units at 125 MW each and 1 unit at 110 MW). In addition to the solar fields, the Modified BSPP would include ancillary buildings, a generation-tie line, a distribution line, and a main access road.

3.2 Compliance Monitoring and Management Personnel

The Monitoring Contractor's team will consist of the following personnel:

- *Compliance Manager (CM):* point of contact position designated by the Monitoring Contractor for all compliance related issues; reports to the BLM AO or the designated BLM PM for all compliance related issues.
- *Compliance Monitors (CMOs):* on-the-ground Monitoring Contractor personnel responsible for observing and reporting compliance with the terms and conditions of the BLM ROW authorization for all phases of project construction.

The Monitoring Contractor shall enter into a contract for the project with NextEra Blythe Solar, LLC for the payment of the third-party compliance monitoring services provided by the Monitoring Contractor. Those fees will be based on hourly rates, or as otherwise agreed to by the Monitoring Contractor and NextEra Blythe Solar, LLC. Payments to the

Monitoring Contractor for work satisfactorily completed may be paid directly to the Monitoring Contractor in advance, in arrears, or from a credit account established with the Monitoring Contractor by NextEra Blythe Solar, LLC. The contract between NextEra Blythe Solar, LLC and the Monitoring Contractor will include a provision that NextEra Blythe Solar, LLC may not terminate the contract with, or payments to, the Monitoring Contractor without prior authorization of the BLM AO.

The BLM's compliance representatives for the Modified BSPP are:

- *BLM Authorized Officer (AO):* Palm Springs Field Manager, the BLM official with the administrative authority for the ROW Grant issuance and authority for accepting and approving project-related changes in accordance with Section 6.0.
- *BLM Project Manager (PM):* staff-level position designated by the BLM AO as the point of contact for all compliance issues. The BLM PM is the primary point of contact at the BLM for the CM and provides unified agency direction to the BLM and NextEra Blythe Solar, LLC. The BLM PM will ensure, to the extent practicable, that information requiring agency review will be disseminated internally and that comments and direction are consolidated and presented to NextEra Blythe Solar, LLC.
- *BLM Compliance Project Manager (CPM):* staff level position to provide as-needed support to the BLM PM. The CPM will complete periodic site visits and advise the BLM PM and BLM AO on compliance related matters.
- *BLM Technical Lead(s):* various resource specialists working at the BLM Palm Springs Field Office and/or California Desert District Office that will be involved with implementation of this project. They will assist the BLM PM, CM, and CMOs with evaluation of conditions and project status relative to mitigation requirements or other stipulations. The BLM technical leads will include archaeologists, biologists, geologists, and other specialists as required.

The NextEra Blythe Solar, LLC compliance representatives for the project are;

- *NextEra Blythe Solar, LLC Project Managers (BSPMs)*: The BSPMs will be responsible for managing all aspects of the Modified BSPP. BSPMs will oversee onsite construction managers, inspectors and environmental project managers. BSPMs are responsible for ensuring the Modified BSPP is constructed in accordance with the ROW Grant and overseeing implementation of environmental commitments.

- *NextEra Blythe Solar, LLC Compliance Manager (BSCM)*: The BSCM will be responsible for providing the appropriate level of resources for successful

implementation of the NextEra Blythe Solar, LLC environmental commitments. The BSCM directs the development and implementation of the preconstruction environmental planning, permitting, and compliance activities; the environmental inspection program; and environmental training. The BSCM will be the designated official responsible for day-to-day coordination with the BLM PM and CM and dispute resolution with respect to mitigation compliance and authorized terms and conditions of the ROW.

- *NextEra Blythe Solar, LLC Designated Biologist and Principal Archeologist*: A Designated Biologist and Principal Archeologist will be identified as part of the NextEra Blythe Solar, LLC Environmental Compliance Team. The Designated Biologist and Principal Archeologist will be approved by the BLM per applicable mitigation measures and ROW stipulations.

- *NextEra Blythe Solar, LLC Environmental Monitors (BSEM)*: The BSEMs will be the on-the-ground compliance personnel responsible for implementing the environmental construction compliance program to facilitate avoidance, minimization, and mitigation measures dictated under the project requirements. This includes resolution of all problem areas or activities found to be in non-compliance. Lead BSEMs will be designated for project components and/or by environmental resource area (i.e. Designated Biologist or Principal Archeologist) and will serve as the primary point of contact for the BSCM, CM, and CMO on site.

The NextEra Blythe Solar, LLC Environmental Compliance Team will be responsible for development and implementation of the Modified BSPP environmental compliance program. In general, the NextEra Blythe Solar, LLC Environmental Compliance Team will be responsible for communication and coordination with the applicable regulatory agencies and ensuring compliance with the various conditions and requirements of the full range of project permits and approvals. NextEra Blythe Solar, LLC will ensure record keeping with respect to due diligence on mitigation (including plans, surveys, reports, keeping plans current) and distribution of those materials to the BLM PM and CM via electronic methods.

3.2.1 Compliance Manager

The Monitoring Contractor's Compliance Manager for the Modified BSPP will oversee management of the ECCMP, prepare project materials, participate in any BLM preconstruction meeting; be provided the option to participate in NextEra Blythe Solar, LLC's Environmental Training Program; supervise the monitoring activities, materials, and schedules; supervise the Compliance Monitors; provide guidance on and review of compliance issues; review and process variance requests; and review and distribute reports.

Specific Compliance Manager responsibilities are:

- Report directly to the BLM PM or BLM AO or other designated BLM Compliance Contacts;
- Participate in the BLM preconstruction meeting;
- Participate in Environmental Training Program/kick-off;
- Verify NextEra Blythe Solar, LLC's compliance with the project environmental requirements;
- Supervise the monitoring activities, materials, and schedules;
- Supervise the CMOs;
- Ensure that all reported non-compliances are tracked for resolution by NextEra Blythe Solar, LLC;
- Review, approve, and distribute monitoring reports, correspondence, and scope of work and schedule changes;
- Review work progress, schedules, and budgets related to compliance monitoring activities;
- Confer with the BLM PM and Compliance Contacts on a regular basis;
- Serve as the contact between BLM and NextEra Blythe Solar, LLC for compliance issues;
- Serve as BLM's representative to permitting agencies, private landowners, and special interest groups regarding the environmental mitigation efforts on the project; and
- Coordinate with the BLM and other agencies, as determined necessary, on reviewing and approving variance requests.

3.2.2 Compliance Monitors (CMOs)

Based on discussions with the BLM PM, the Monitoring Contractor will provide sufficient on- the-ground CMOs during construction of all phases of the project. The number of CMOs will be determined based on the specific activities during each construction phase. Specifically, the need for the CMOs may be reevaluated throughout the construction phase and a schedule adjusted, as necessary, as conditions demand.

During construction, many factors may affect the specific deployment of the CMOs. These include the activity occurring at specific times of inspection, any noncompliance or problem areas documented during previous observations by the CMOs, site- specific

conditions at the time of construction, skill levels and attitudes of the contractor crews and foremen, and the number of team members.

The Monitoring Contractor's planned monitoring coverage assumes that the construction contractors will demonstrate a high level of environmental compliance, and that NextEra Blythe Solar, LLC's compliance personnel will be qualified and experienced.

The CM will regularly evaluate the effectiveness of the environmental compliance monitoring in consultation with the BLM and compliance contacts to ensure adequate staffing. If determined necessary, the Monitoring Contractor will provide additional, adequately trained support staff to act as CMOs on an as-needed basis.

The primary responsibility of the CMOs will be to monitor and document NextEra Blythe Solar, LLC's construction, compliance, and/or noncompliance with the project environmental requirements. The CMOs will also review and approve variance requests, as appropriate to their authority level, for implementation of limited variations from mitigation measures previously agreed to by NextEra Blythe Solar, LLC or stipulated by other agencies (refer to Appendix 4 in the ROD and Section 6.0, Variances).

Prior to the start of construction, the CMOs will become familiar with the NextEra Blythe Solar, LLC environmental compliance management program, participate in the BLM preconstruction meeting, participate in the NextEra Blythe Solar, LLC Worker Environmental Awareness Program (WEAP, Attachment D), and receive additional training as needed from the Monitoring Contractor. The CMOs will become familiar with the roles and responsibilities of the NextEra Blythe Solar, LLC field team, the organizational structure of the construction methods, environmental reporting responsibilities, and the chain of communication. It is assumed that NextEra Blythe Solar, LLC will provide the CMOs and the CM with copies of all permit requirements for the project prior to initiation of construction.

At a minimum, the CMOs will maintain daily contact with the NextEra Blythe Solar, LLC Environmental Compliance Team. Construction activities will be inspected on a regular basis by the CMOs, and environmentally sensitive areas will be regularly inspected to ensure protection of the identified resources.

The CMOs will communicate with the NextEra Blythe Solar, LLC Environmental Compliance Team on a regular basis. This approach will allow the NextEra Blythe Solar, LLC Environmental Compliance Team to exchange information on the status of construction and to discuss any significant construction events scheduled over the next

2 or 3 days. The CMOs may inspect all activities either with the NextEra Blythe Solar, LLC Environmental Compliance Team or independently.

The CMOs will have the authority to halt any construction activity that has the potential to damage a sensitive environmental resource. This could include conducting initial disturbance absent monitor presence; activity in non-compliance with a term, condition, or stipulation of a ROW grant, etc... In the event of potential non-compliance, the CM will immediately notify the NextEra Blythe Solar, LLC Environmental Compliance Team. The NextEra Blythe Solar, LLC Environmental Compliance Team lead will initiate his/her approved chain of command system to initiate issue resolution.

The CMOs will record observations, including digital photo documentation at each location visited. This process will ensure consistent and accurate reporting of site conditions at the time of inspection. Each activity monitored will be assigned a compliance level and documented in a weekly status update.

4.0 Communication

Communication and collaboration is a critical component of a successful environmental compliance program and can promote a positive and efficient work environment. BLM expects the BSCM and BSEMs to interact regularly with the BLM Compliance Monitoring Team and to maintain professional, responsive communications at all times. Similarly, it is expected that NextEra Blythe Solar, LLC representatives will coordinate closely with the BLM and CM to address and resolve issues in a timely manner. This section provides several tools/requirements for transparent communication throughout the project, and to facilitate efficient dissemination of project information about ongoing surveys and mitigation measures, construction activities, issues, and planned or upcoming work.

4.1 Pre-construction Compliance Coordination

In accordance with mitigation measures and ROW terms and conditions, NextEra Blythe Solar, LLC is required to perform a number of pre-construction activities, including but not limited to conducting pre-construction biological surveys, submitting and obtaining permits, and submitting and obtaining BLM approval of mitigation plans. The purpose of the pre-construction coordination process between NextEra Blythe Solar, LLC and the BLM Compliance Monitoring Team is to discuss submittal status, agency review and approval cycle, and pre-construction mitigation status. Additionally, the goal of the pre-construction process is to complete all required actions, so that the BLM and other agencies, as appropriate, can issue NTPs for the project.

4.1.1 Pre-construction Kickoff Meeting(s)

At least one pre-construction meeting will be held with the BLM, NextEra Blythe Solar, LLC Environmental Compliance Team and construction team, the BLM Compliance Monitoring Team, and other agencies or parties as deemed appropriate by BLM. The pre-construction kickoff meeting will serve to outline agency expectations of the team, to agree on the project's communication protocol and chain of command, and to further discuss the POD.

4.1.2 Construction Meetings

NextEra Blythe Solar, LLC will conduct field meetings as-needed with Project Managers, contractor supervisors and foremen, and NextEra Blythe Solar, LLC's environmental representatives to discuss work completed, work anticipated for the following period, and the implementation status of mitigation measures. The field meetings will also be a forum for discussing safety and environmental compliance

issues. NextEra Blythe Solar, LLC may request BLM and CMOs to participate in the meeting to help resolve any issue that may have arisen during the previous period. Alternatively, NextEra Blythe Solar, LLC may recommend a separate meeting to discuss mitigation, potential variances, or other project-related issues with the BLM and/or other agencies.

In addition to the progress meetings conducted at the field level, the BSCM, BSEMs, CMOs, BLM PM, and/or other jurisdictional agencies will participate in a regular teleconference call. The teleconference calls would be similar to the progress meeting; however, the conference calls would focus on the mitigation monitoring, current construction and operation status, and potential issue resolution.

4.2 Communication Protocol during Construction

The following protocols have been formulated to ensure timely and accurate information is disseminated to all parties involved in the construction process of the Modified BSPP, facilitating a responsive, solution-oriented work environment (see Figure 1 – Communication Protocol):

- The BLM Compliance Monitoring Team will adhere to a mutually agreed-upon communication protocol between NextEra Blythe Solar, LLC and BLM while on site; the NextEra Blythe Solar, LLC protocol facilitate the CMOs' ability to communicate transparently with BLM.
- In general, the CMOs' primary point of contact on site will be the BSEMs. If issues can't be resolved at the CMO/BSEM level, they will be initially elevated to CM and BLM PM via email or phone, whichever is determined to be applicable/appropriate to the situation.
- NextEra Blythe Solar, LLC will inform the CM of all survey and construction activity on a daily basis, either verbally in status meetings or by email, including, but not limited to, location of such activities and NextEra Blythe Solar, LLC personnel mobilization associated with such activities.
- The CMO's may converse with any and all personnel on the construction site to ask questions about their activity, but the construction personnel may opt to refer him/her to the appropriate NextEra Blythe Solar, LLC official for an answer. If the question relates to a potential resource-threatening non-compliance issue, the CMO will immediately notify the BSEM, and jointly discuss the issue with the construction personnel on site.

- NextEra Blythe Solar, LLC personnel will not, under any condition, direct the work of a CMO. If concerns about a CMO arise, the CM and BLM PM will be notified immediately.
- NextEra Blythe Solar, LLC will provide a list of all BSEMs on site, their titles/responsibilities, and their contact information. Updated distributions will be utilized to keep all parties informed of monitor and staff additions/changes. This list of personnel and all subsequent updates shall be distributed to all persons on the list throughout the construction process.

4.2.1 Communication Specific to Non-compliance

There are varying levels of severity with respect to non-compliant events. Severe non-compliance events specific to BLM's scope of authority, such as "take" or discovery of human remains during construction on the project, have established protocols within approved documents such as the BO, MOA, and their appendices.

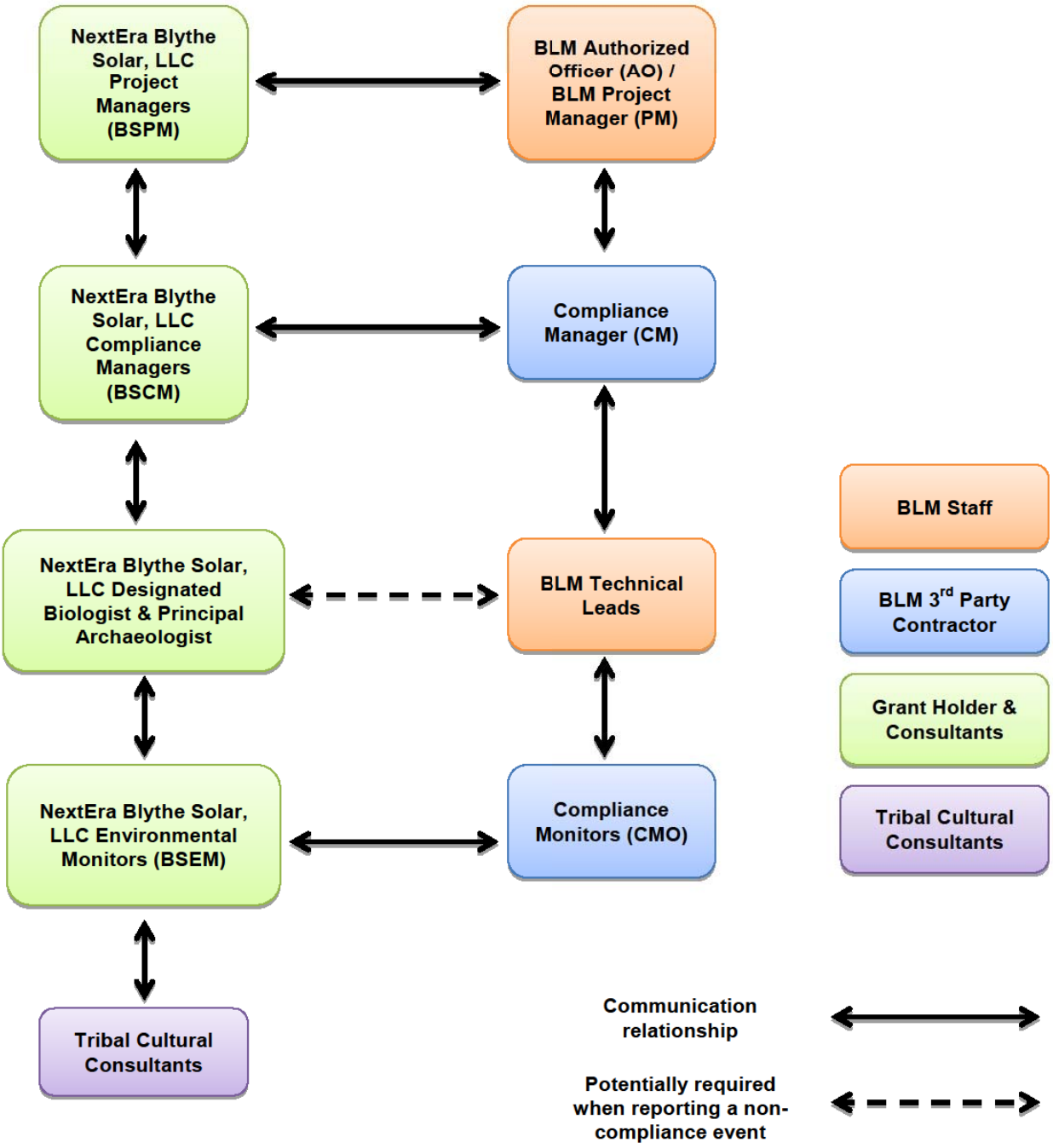
Regardless of the severity of the event, the BLM and CM will be immediately notified by NextEra Blythe Solar, LLC or the BSCM if such event occurs and appropriate communication channels will be initiated. The communication protocols identified below have been formulated for non-severe non-compliance events.

- Step 1. CMO or BSEM verbally notifies NextEra Blythe Solar, LLC construction staff and requests corrective action.
- Step 2. BSEM and/or CMO informs NextEra Blythe Solar, LLC and BLM of non-compliance event immediately and reports whether NextEra Blythe Solar, LLC has corrected the non-compliance event.
- Step 3. BSEM and/or BLM prepares a written Non-Compliance Report and transmits it to BLM PM.

4.3 Coordination with Other Agencies

Several local, state, and federal agencies have jurisdiction over portions of the project. The BLM, as the lead agency, is responsible for ensuring that mitigation measures reviewed and approved by the BLM during the EIS process are implemented throughout construction. Other jurisdictional agencies are required to ensure compliance with their respective measures under their jurisdiction and may visit the project site from time to time and request information regarding the status of a mitigation measure. NextEra Blythe Solar, LLC will be responsible for satisfying requests from jurisdictional agencies.

FIGURE 1
Communication Protocol



5.0 Reporting and Documentation

The Monitoring Contractor and all compliance monitoring personnel will use a comprehensive monthly summary database reporting system that is posted on a non-public, secure website and available for review to other jurisdictional agencies. Under this program, each monthly report, consisting of all compliance levels and photographic documentation from logs, will be available each month and will provide the BLM project personnel, NextEra Blythe Solar, LLC and applicable agencies with a readily accessible record of construction progress, photographic documentation, and documentation of compliance with the project environmental requirements. All reporting and documentation will be easily downloadable in formats used by the BLM and other agencies. At the end of construction, the Monitoring Contractor will organize and submit this electronic reporting and documentation to the BLM to be used in the BLM administrative record for this project. The specifics of the reporting and documentation to be used for the Modified BSPP are described in the following sections.

5.1 Weekly Status Updates

5.1.1 Weekly Meetings

In addition to the progress meetings conducted at the field level, the BSCM, BSEMs, CMOs, BLM PM, and/or other jurisdictional agencies will participate in a regular teleconference call. The teleconference calls would be similar to the progress meeting; however, the conference calls would focus on the mitigation monitoring, current construction and operation status, and potential issue resolution.

5.1.2 Weekly Progress Reports

Each CMO will compile his/her activity logs and contact information documents into a weekly status update on the required cover and form provided in Attachments A and B, respectively. The CMO will document the construction level as a percent complete or other identifying method as agreed to by the BLM; the presence of sensitive species or habitat and culturally sensitive sites; and provide a brief description of the construction activities observed (such as road grading, foundation installation, erosion control, etc.). When appropriate, relevant digital photographs will be taken and included in the weekly report. Weekly progress reports will be distributed to the BLM PM and AO.

Each separate activity monitored and documented in a log will be assigned a compliance level. The compliance levels that will be used for the Modified BSPP are:

- Communication;
- Acceptable;

- Problem Area;
- Noncompliance; and
- Serious Violation.

5.1.2.1 Communication

A communication report will be prepared when necessary to document and track relevant meetings or discussions between the CMO and agencies, NextEra Blythe Solar, LLC representatives, monitors, or other contractor personnel.

5.1.2.2 Acceptable

An acceptable environmental construction compliance level will be assigned to an activity when an inspected areas or activity complies with the project environmental requirements and all acceptable avoidance, minimization, and mitigation measures have been adequately implemented. No corrective action is necessary.

5.1.2.3 Problem Area

A problem area environmental construction compliance level will be assigned when activity does not meet the definition of acceptable, but is not considered a noncompliance. This level indicates that a minor deviation from an approved activity or condition has occurred and action is being addressed in the field to immediately remedy the situation. BSEMs and CMO confirm that no resources are being impacted and no potential for resource damage exists. The problem area category will be used to report a range of events and observations including:

- An incident that is accidental or unforeseeable but is not out of compliance with the project environmental requirements, and NextEra Blythe Solar, LLC's response is appropriate and timely. An example would be a fuel leak where project personnel respond properly by stopping, containing, and cleaning up the spill in accordance with the project environmental requirements.
- A location where the project is not out of compliance with the environmental requirements but, in the judgment of the CMO, damage to resources could occur if corrective actions are not taken. Some examples are:
    - A topsoil pile located on the bank of a drainage; or
    - An improperly constructed/located erosion control structure.
- An activity that the CMO determines is an unintentional and isolated departure from the project environmental requirements, with no damage to resources. An example would be a small amount of blading or mowing outside the access

pathway that has no effect on sensitive resources such as sensitive plant habitat or a water body.

If a problem area is resolved in a timely manner, it will not be considered a noncompliance. If a problem area is found to be a repeat situation or multiple instances of a similar nature occur, is not corrected within the established time frame, or results in resource damage because timely corrective action failed to occur, the CMO may document the problem area as a noncompliance as described in the following section.

5.1.2.4 Noncompliance

A noncompliance report will be issued when a CMO observes an activity that violates (defined as not in compliance with) the project environmental requirements, or other requirements; results in damage to resources; or places sensitive resources, at unnecessary risk. Some examples of noncompliance activities are:

- Ground-disturbing activities conducted outside the approved ROW limits; or
- Surface-disturbing activities conducted without an appropriate biological or cultural resources monitor present.

The CMO will notify NextEra Blythe Solar, LLC's Environmental Compliance Team about a noncompliance before issuing a noncompliance report. The noncompliance report will include the name of the BSEMs and the time of notification. Where practicable and where the nature of the noncompliance activity warrants, the BSEMs will work closely and collaboratively with the CMO to determine the appropriate corrective action.

Resolution of noncompliance activities will involve close coordination with the NextEra Blythe Solar Environmental Compliance Team, the CMO, CM, BLM PM, and contractor construction supervisory personnel to ensure that the corrective measures are properly understood and implemented. It is the responsibility of the NextEra Blythe Solar, LLC to provide follow-up documentation to the BLM and other agencies with appropriate jurisdiction over the issue as well as to the CM. Once NextEra Blythe Solar, LLC documents the resolution of a noncompliance, the applicable CMO will inspect the area and verify and document that the noncompliance has been adequately resolved.

5.1.2.5 Serious Violation

A serious violation report will be issued by a CMO immediately on observing an activity that is not in compliance with the project environmental requirements and causes substantial harm to resources or poses a serious threat to sensitive resources or worker/public safety. Examples of serious violations include deliberately conducting an

activity that results in disturbance within an exclusion zone for a sensitive resource, repeated or cumulative noncompliance activities that could lead to a substantial impact on resources, and failure to correct previously identified noncompliance activities in an established time frame.

A serious violation report may result in the need for the CM and the BLM PM participating in a conference call or meeting with NextEra Blythe Solar, LLC to discuss the violation, the proper corrective actions, and possible follow-up enforcement actions that could be imposed. It will be the responsibility of NextEra Blythe Solar, LLC to provide follow-up documentation to the BLM and other agencies with appropriate jurisdiction over the issue as well as to the CM. Once NextEra Blythe Solar, LLC documents the resolution of a serious violation, the CMO will inspect the area and verify that the issue has been adequately resolved.

5.2 Monthly Summary Reports

Monthly summary reports will be issued that briefly describe construction activities during the reporting period and summarize by compliance level the number of reports completed by the CMOs during that reporting period and cumulatively for the construction period for that project phase. The monthly summary report will also include a table of problem area and noncompliance reports issued by the CMOs during the reporting period and the Level 1, 2, and 3 variance requests approved by the CMOs and the CM during the reporting period. The monthly summary report will also include a table summarizing the net acreage of land affected by approved variances on federal land and, for the Archeological Resources Protection Act and Endangered Species Act, nonfederal land for the reporting period as well as cumulatively. The Monitoring Contractor's baseline electronic database reporting system will be designed to generate all the information in the tables of the monthly summary report.

The monthly summary reports will be posted on the non-public project website (refer to Section 5.3). When the monthly summary report is posted, the Compliance Manager will send an email to the authorized distribution that it is available. The email will include the link to the website. The BLM, Monitoring Contractor, and NextEra Blythe Solar, LLC representatives will be included in the distribution for the monthly summary report. A sample monthly summary report is provided in Attachment C.

5.3 Non-Public Project Website

The Monitoring Contractor will establish and maintain a non-public, password-protected project website to display the weekly status updates and monthly monitoring reports and the approved Level 1, 2, and 3 variances (refer to Section 6.0, Variances). The Modified BSPP website may also be used to post meeting minutes, notes from conference calls,

and guidance from agencies regarding interpretation of environmental requirements. The BLM and Monitoring Contractor representatives will have access to the entire website. The NextEra Blythe Solar, LLC representatives will have access to parts of the website as authorized by the BLM PM.

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6.0 Variances

During construction of the Modified BSPP, unforeseen or unavoidable site conditions could result in the need for changes from the approved mitigation measures and construction procedures. Additionally, the need for route realignments, extra workspace, or changes to previously approved construction work areas may arise. Changes to previously approved mitigation measures, construction procedures, and construction work areas will be handled in the form of variance requests to be submitted by NextEra Blythe Solar, LLC and reviewed and approved or denied by the BLM, with the delegation of some authority for variances to the Monitoring Contractor. The variance process will also be a good mechanism to clarify discrepancies or inconsistencies discovered in project materials and/or to distribute information to the entire project team.

A system of three variance levels (Levels 1, 2, and 3) will be used to categorize and process variance requests. The three variance levels, the review and distribution process, and the decision-making authority proposed for each level are discussed in the following sections. A sample variance request form is provided in Attachment E.

6.1 Level 1 Variances (Field Decisions)

Level 1 variances are site-specific, minor, performance-based changes to project environmental requirements, construction methods, or mitigation measures that provide equal or better protection to environmental resources or better constructability. These minor variance requests can be reviewed and either approved or denied by the Compliance Monitors in the field during normal construction operations.

Examples of Level 1 variance requests include:

- Allowing rubber-tired vehicles to use additional access roads that would not require any improvement to the road or repairs after construction (“like use”);
- Minor variations in site-specific plans that reflect differences in site conditions from those that were expected when the plan was developed (e.g., relocation of a spoil storage area within previously approved work areas); and
- Minor changes to the project design that are required due to site-specific restrictions.
- Level 1 variances may also be used to document and disseminate agency-directed changes to mitigation measures.

To initiate a Level 1 variance request, BSCM will fill out a variance request form using the form in Attachment E and obtain the appropriate signatures. The BSCM will then contact a CMO to review the proposed change. The BSCM and the CMO will work together to evaluate the site-specific situation and determine if the level of variance request is appropriate.

The CMO may approve a Level 1 variance request if the results of implementing the change will provide equal or better protection for the resource than the original mitigation measure or if the original mitigation measure is not applicable to that specific site. If a Level 1 variance request is approved in the field, the CMO will sign the variance request form. A Level 1 variance request can be implemented in the field as soon as it is approved by the CMO.

The CMO will document the variance approval in his/her log and will include the variance in the weekly status update and will transmit the approved form to the CM for posting on the project website (refer to Section 5.3, Non-Public Website).

If the requested variance exceeds the CMO's authority level, the CMO will inform the BSCM representative that a Level 2 or Level 3 variance request is required.

6.2 Level 2 Variances

A Level 2 variance request exceeds the field decision authority of the CMO and requires processing by the CM. Before the CM can issue approval of a Level 2 variance request on federal land, the BLM PM must approve the request. Level 2 variance requests generally involve project changes that would affect an area outside the previously approved work area, but within the areas previously surveyed for cultural resources, sensitive species, and biological resources. Level 2 variance requests typically require the review of supplemental documents, correspondence, and records.

Examples of Level 2 variance requests include:

- The use of extra workspace outside the previously approved work area but within previously surveyed areas;
- The use of existing access roads that have not been previously approved if the use would not be considered "like use" that could be approved as a Level 1 variance (refer to Section 6.1, Level 1 Variances);
- Modifications to the plans that are specifically different than those in the approved POD.

To initiate a Level 2 variance request, the BSCM or other designated representative will fill out a variance request form, prepare the appropriate supporting documentation, and obtain the required signatures.

The BSCM will complete and submit the variance request form and supporting documentation by e-mail (scanned copy) or fax to the BLM PM with a copy to the CM. Once the approval of the BLM PM is obtained, the CM will process the request.

If the Level 2 variance request is approved, the CM will sign the variance request and e-mail the approved form (scanned copy) to the BSCM, the CMO, and the BLM PM and Compliance Contacts. The variance may be implemented in the field as soon as the approved variance is received. Verbal approval for Level 2 variance requests will not be granted. The CM will log the variance approval and will include it in the weekly report (refer to Section 5.1) and post the approved variance request form on the project website (refer to Section 5.3).

6.3 Level 3 Variances

Level 3 variance requests generally involve project changes that would affect an area outside the previously approved work area that are outside the areas previously surveyed for cultural resources, and biological resources, or one that would change the function, structure, technology required, or other part of the project previously approved in the POD. Level 3 variances may need to be implemented through an amendment to the ROW Grant.

To initiate a Level 3 variance request, the BSCM or other designated representative will fill out a variance request form, prepare the appropriate supporting documentation, and obtain the required signatures.

The BSCM will complete and submit the variance request form and supporting documentation by e-mail (scanned copy) or fax to the BLM PM and the CM. Once the approval of the BLM PM is obtained, the CM will process the request.

Level 3 variance request approvals must be signed by the BLM PM or the BLM AO in the case of a ROW Grant amendment. The variance may be implemented in the field as soon as the approved variance is received. The CM will document the variance approval in the log and weekly status update (refer to Section 5.1) and post the approved variance request form on the project website (refer to Section 5.3).

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7.0 Stop Work Authority

The BLM has the authority to stop construction of the Modified BSPP if an activity is determined to be a deviation from the project environmental and cultural resource protection requirements or approved construction plans authorized by the BLM ROW Grant. This authority may be delegated to the Monitoring Contractor, the CM, and/or the CMOs, as determined appropriate by the BLM.

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8.0 Training and Preconstruction Meeting

The Monitoring Contractor will ensure that NextEra Blythe Solar, LLC prepares and conducts an Environmental Training Program for the environmental compliance personnel and construction contractor personnel prior to the start of construction. The BLM PM and Compliance Contacts, and the Monitoring Contractor's CM, and CMOs will participate in the Environmental Training Program to present an overview of the ECCMP and to become familiar with NextEra Blythe Solar, LLC's environmental program and personnel. The Monitoring Contractor's CM or the BLM PM will explain the various components of the ECCMP, emphasizing the objectives of the ECCMP. The discussion will focus on the activities of the CMOs and their interactions with NextEra Blythe Solar, LLC's construction personnel.

The monitoring and documentation of compliance issues and construction progress will be described. A clear and concise explanation will be presented with respect to the variance request decision authority that the CMOs will have in the field. Procedures that may be required to address variance requests will also be presented, as well as the time frame required for decisions to be made prior to implementation.

Before the NextEra Blythe Solar training, the Monitoring Contractor will ensure that BLM holds a preconstruction meeting. At that meeting, the BLM PM will discuss the requirements of the ROD, the additional stipulations, and ROW Grant as well as those of the POD. The Monitoring Contractor's CM and one CMO will participate in this preconstruction meeting.

In addition to participation in the NextEra Blythe Solar Environmental Training Program and the BLM preconstruction meeting, the Monitoring Contractor will train the CMOs in all project-specific procedures, duties, responsibilities, reporting requirements, and authorities, which includes the authority to grant variances, to complete their assigned tasks during monitoring of the Modified BSPP construction activities.

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9.0 Equipment

Personnel responsible for monitoring and documenting compliance with the measures in the ECCMP will require field support equipment. Specifically, the Monitoring Contractor's CM, and each CMO will be equipped with the following:

- Notebook computer and appropriate software to facilitate the compilation, transfer, and storage of data
- Digital camera
- Cellular phone (smart phone) and vehicle adapter for power charge
- Four-wheel drive vehicle

Additional equipment such as binoculars may also be needed, but would be provided on an as-needed basis.

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Attachment A

Monitoring Report Cover Page Form

PROJECT: MODIFIED BLYTHE SOLAR POWER PROJECT

COMPLIANCE MONITORING PROGRAM MONITORING REPORT COVER PAGE

Sample Monitoring Report (Cover Page)

The following report is a compilation of the monitoring reports issued by the Compliance Monitors and/or Compliance Manager for activities conducted on [Month] [Day], 20[XX]. Should you have any questions regarding the information contained in this report, please contact MONITOR at (XXX) XXX-XXXX (office) or (XXX) XXX-XXXX (cell phone).

Communication

Acceptable

Problem Area

Noncompliance

Serious Violation

Approved Level 1 Variance

Approved Level 2 Variance

Approved Level 3 Variance

Compliance Level

Total Reports

Attachment B

Monitoring Report Form

PROJECT: MODIFIED BLYTHE SOLAR POWER PROJECT

ENVIRONMENTAL CONSTRUCTION COMPLIANCE MONITORING PROGRAM MONITORING REPORT

Report Number: _____ Date of Report: _____

Compliance Monitor: _____ Compliance Level: _____

Environmental Team Member: _____ Construction Method: _____

Location

Construction Spread: _____ Tract #: _____ Tract #: _____ Tract #: _____

Begin Milepost: _____ End Milepost: _____

Begin Station: _____ End Station: _____

Observation Notes:

Photos:

Attachment C

Monthly Summary Report Form

DEVELOPER: NEXTERA BLYTHE SOLAR

PROJECT: MODIFIED BLYTHE SOLAR POWER PROJECT

Environmental Construction Compliance Monitoring Program
Summary Report for the Period: XX-XX, 20XX

The following is a summary of the reports issued by the Compliance Monitors and Compliance Manager for activities conducted between XX-XX, 20XX. This report also summarizes Level 1, 2, and 3 variance requests approved during the same period. The environmental compliance monitoring program for the Project is being implemented under the direction of the Bureau of Land Management (BLM). Copies of the monitoring reports and approved Level 1, 2, and 3 variance requests are posted and available for review on the environmental compliance monitoring program website.

Should you have any questions regarding the information contained in this report, please contact MONITOR at (XXX) XXX-XXXX (office) or (XXX) XXX-XXXX (cell phone).

SUMMARY OF ACTIVITIES

Between XX-XX, 20XX, the Compliance Monitors and Compliance Manager issued X monitoring reports. A tabular summary of the reports by compliance level is presented below.

PROJECT: Modified Blythe Solar Power Project

ENVIRONMENTAL CONSTRUCTION COMPLIANCE MONITORING PROGRAM
Summary of Monitoring Reports for the Period: XX-XX, 20XX

Compliance Level	Compliance Reports for the Period	Cumulative Compliance Reports for the Project
Communication	X	X
Acceptable	X	X
Problem Area	X	X
Noncompliance	X	X
Serious Violation	X	X
Approved Level 1 Variance	X	X
Approved Level 2 Variance	X	X
Approved Level 3 Variance	X	X
Total Reports	X	X

During this period, three full-time Compliance Monitors conducted observations of project-related activities and documented NextEra Blythe Solar's compliance with the project documents and permits. The Compliance Monitors continued to coordinate with the NextEra Blythe Solar Environmental Compliance (EC) Team to inspect and discuss areas of concern prior to construction, review areas potentially subject to variance requests, assist with resolution of landowner complaints, and clarify interpretations of the project requirements. The activities of the three Compliance Monitors were directed by the Compliance Manager who continued to coordinate with the BLM and field management and support staff.

A brief summary of the activities conducted during the reporting period is presented below. Copies of the detailed monitoring reports that were used to prepare this summary are posted and available for review on the environmental compliance monitoring program website.

Summary of Activities

A brief text summary of activities that occurred by spread during the reporting period will be provided here

PROBLEM AREAS AND NONCOMPLIANCES

_____ problem area report(s) and _____ noncompliance report(s) were issued by the Compliance Monitors between _____ and _____ as shown in the table below. The Compliance Monitors were notified of _____ noncompliance report(s) issued by the NextEra Blythe Solar EC Team.

EXAMPLE OF SUMMARY OF PROBLEM AREA AND NONCOMPLIANCE REPORT

Compliance Level/Report Number	Date Issued	Location (Spread/ Milepost)	Description	Corrective Action
-None-				
Monitoring Report #XX	X/X/20XX	Spread X – X.X	A construction vehicle was parked outside of the approved right- of-way.	The NextEra Blythe Solar EC Team (NAME) was notified and contacted the foreman to have the vehicle moved back onto the approved workspace.
Noncompliance				
-None-				
It was reported to the Compliance Monitors that the NextEra Blythe Solar EC Team issued one noncompliance report. This noncompliance occurred on Spread _____ on _____, 20___ and was issued to the trenching crew for partially burying the windrowed seedbank with trench spoil for approximately 1,000 feet.				

VARIANCES

_____ Level 1 variance request was approved during the period. _____ Level 2 and _____ Level 3 variance requests were approved between _____ and _____ as shown in the table below. A summary of the acreage of land affected by the approved variance requests is also provided below.

Example of Summary of Approved Level 1, 2, and 3 Variances

Variance Number	Date Issued	Location (Spread/Milepost)	Brief Description	Net Acreage Affected – Federal Land	Net Acreage Affected – Non- Federal Land
LEVEL 1					
XX-XX-001	X/X/20XX	Spread X -X.X	Approved the like-use of an existing gravel road. This road is needed to allow travel around and 8-inch- diameter aboveground waterline that crosses the right-of-way.	X.X	X.X
LEVEL 2					
-None-					
LEVEL 3					
-None-					

Example of Summary of Acreage Affected by Variances

	Acreage Affected This Reporting Period	Cumulative Acreage Affected
Federal Land		
Non-Federal Land with some Federal Jurisdiction		
Total		
Includes variances on non-Federal land that are within 300 feet of previously identified cultural resources or listed species or their habitat.		

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Attachment D

Certification of Completion of Worker Environmental Awareness Program

Certification of Completion

Worker Environmental Awareness Program

This is to certify these individuals have completed a mandatory Bureau of Land Management- approved Worker Environmental Awareness Program (WEAP). The WEAP includes pertinent information on cultural, paleontological, and biological resources for all personnel (that is, construction supervisors, crews, and plant operators) working on site or at related facilities. By signing below, the participant indicates that he/she understands and shall abide by the guidelines set forth in the program materials. Include this completed form in the Monthly Compliance Report.

No.	Employee Name	Title/Company	Signature
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			
21.			
22.			
23.			
24.			
25.			

Cultural Trainer: _____ Signature: _____ Date:_____/____/_____

Paleo Trainer: _____ Signature: _____ Date:_____/____/_____

Biological Trainer: _____ Signature: _____ Date:_____/____/_____

Attachment E

Variance Request Form

Variance Request Form

LOGO

COMPANY
ADDRESS
CITY, STATE ZIP
PHONE

Variance:_____
Request No.:_____
Date Submit:_____
Date Approval Needed:_____
Date Agency Received:_____
Agency Approval Reference No.:_____

Request Prepared by:
Spread/ Location (Milepost):
Alignment Sheet / Sta. No.:
Net acreage affected:
Tract No:
Landowner:
In or within 50 feet of a wetland: ☐ Yes ☐ No
Current Land Use/ Vegetative Cover:
Within 50 feet of a water body: ☐ Yes ☐ No
Nearby Features (Water body, T&E Habitat, Wetland, Noxious Weed) Area, Residence, Cultural Resource Site (distance, etc.):

Variance Level: ☐ Level 1 ☐ Level 2 ☐ Level 3 **(To Be Assigned by Designated Representative)**

Variance From: ☐ Permit ☐ Plan/Procedure ☐ Specification ☐ Drawing ☐ Mitigation Measure ☐ Other:

Detailed Description of Variance: Attachments? ☐ Yes ☐ No Photos? ☐ Yes ☐ No

Variance Justification:

For (Company Name) Use Only

Additional Surveys Required	Surveyed Corridor Description	Additional Surveys Completed
Cultural Survey ☐ Yes ☐ No		☐ Yes ☐ No
T & E Survey ☐ Yes ☐ No		☐ Yes ☐ No
Report Documenting Survey:		

Sign-off (as appropriate)	Name (print)	Approval Signature	Conditions (See Attached)
Contractor Sup't. or Env. Coordinator			☐ Yes ☐ No
Lead Environmental Inspector			☐ Yes ☐ No
Spread Supervisor			☐ Yes ☐ No
Environmental Field Manager			☐ Yes ☐ No
ROW Agent			☐ Yes ☐ No

For BLM Project Manager or Compliance Contact Use Only

Variance Approved: ☐ Variance Denied: ☐ Date:

Signature:

For Compliance Manager and Monitor Use Only

Variance Approved: Variance Denied Date:

Signature:

Stipulations:

Spread: OPPC Variance Request No.:

VARIANCE CONDITIONS

Name: Title: Organization:

Conditions:

Name: Title: Organization:

Conditions:

Name: Title: Organization:

Conditions:

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