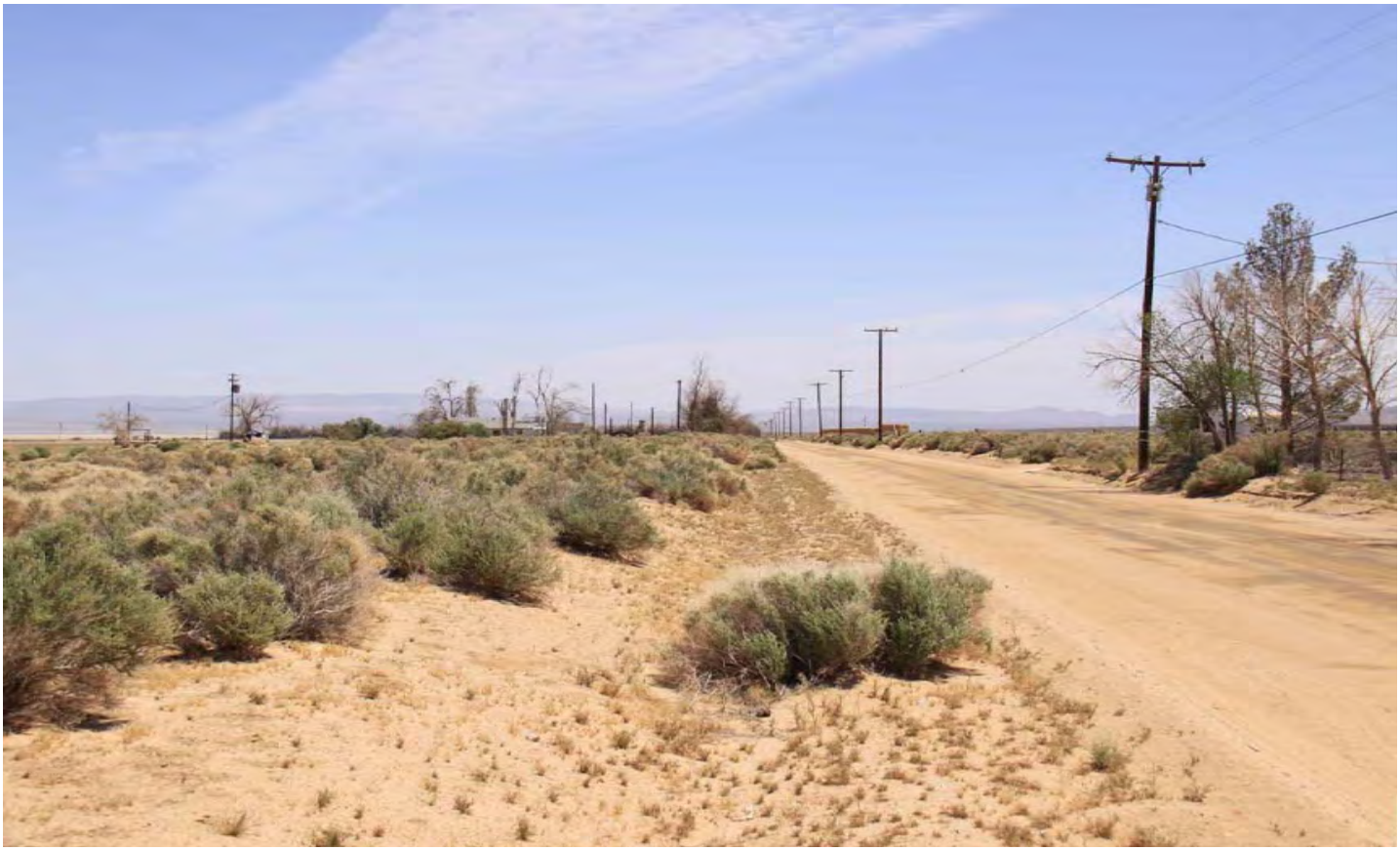
SOUTHERN CALIFORNIA EDISON'S LOCKHART SUBSTATION PROJECT

Final Mitigated Negative Declaration
CPUC A.11-05-006
State Clearinghouse No. 2011051041

Prepared for
California Public Utilities Commission

July 2011



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Lockhart Substation Project (A.11-05-006)
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CHAPTER 1
Introduction

1.1 CEQA Process

Pursuant to the requirements of the California Environmental Quality Act (CEQA, Pub. Res. Code § 21000 et seq.), the CEQA Guidelines (14 Cal. Code Regs. § 15000 et seq.) and California Public Utilities Commission (CPUC) General Order (GO) 131-D, the CPUC prepared an Initial Study to evaluate potential impacts related to the application of Southern California Edison (SCE) (A.11-05-006) for a Permit to Construct (PTC) the proposed Lockhart Substation Project (Project). Because the Initial Study identified potentially significant environmental effects that would be avoided or reduced to a less-than-significant level by implementing revisions to the Project that SCE proposed or agreed to, and because there was no substantial evidence in light of the whole record before the CPUC that the Project, as revised, may have a significant effect on the environment, a draft Mitigated Negative Declaration was prepared.

The Initial Study was attached to the draft Mitigated Negative Declaration (Draft IS/MND) and circulated for public review according to CEQA Guidelines Section 15071. The Draft IS/MND was distributed to federal, state, and local agency representatives, property owners within 300 feet of the Project, two local libraries (Adelanto Branch Library and Barstow Branch Library), and other interested individuals as outlined in Appendix D of the Draft IS/MND. In accordance with CEQA Guidelines Section 15105(b), the public review and comment period began on May 16, 2011, and ended on June 14, 2011.

The CPUC must consider the Draft IS/MND and the comments it receives during the review period prior to adopting an MND. This document includes:

(a) A list of public agencies and organizations that commented on the Draft IS/MND;

(b) Comments and recommendations received on the Draft IS/MND, verbatim; and

(c) Responses of the CPUC, as the CEQA Lead Agency, to comments and recommendations received on the Draft IS/MND.

The combination of the Draft IS/MND, which is included in Appendix A, agency and public comments on the Draft IS/MND, and the CPUC's responses to these comments comprise the Final MND for the Project. Comment letters and responses are provided in Chapter 2. The purpose of the Final MND is to provide corrections and clarity to certain facts set forth in the Draft IS/MND, if necessary, to ensure accuracy. No new significant environmental impacts are identified in this Final MND, and no mitigation measures presented in the Draft IS/MND were

deleted. However, minor modifications were made to Mitigation Measure CPUC-BIO-1, as indicated in the Mitigation Monitoring, Reporting, and Compliance Plan (MMRCP), which is provided in Appendix B.

1.2 Public Review Process

On May 16, 2011, the CPUC mailed a notice to relevant agencies, organizations, and individuals residing in the Project area to announce the availability of the Draft IS/MND for review. A copy of the Draft IS/MND was included with the notice. Copies of the Draft IS/MND also were provided for public review at two local libraries: the Adelanto Branch Library and the Barstow Branch Library. To enable the public to ask questions, provide comments, and obtain additional information on the Project analyzed in the Draft IS/MND, the CPUC established a web site (http://www.cpuc.ca.gov/Environment/info/esa/lockhart/index.html), a Project-specific e-mail address (lockhartsubstation@esassoc.com), comment fax line ((415) 703-2200), and a mailing address (225 Bush Street, Suite 1700, San Francisco, CA 94104).

In accordance with CEQA Guidelines Section 15105(b), the public review and comment period for the Draft IS/MND began on May 16, 2011, and ended on June 14, 2011. All comments received are presented, and responses provided, in Chapter 2.

1.3 Comments on the Draft IS/MND

The agencies and organizations that submitted written comments on the Draft IS/MND during the public review period are listed below in the order in which the letter was received. Dates of submittal are noted.

- Native American Heritage Commission (May 27, 2011)
- Lahontan Regional Water Quality Control Board (June 6, 2011)
- Department of Toxic Substances Control (June 3, 2001)
- Mojave Desert Air Quality Management District (May 31, 2011)
- California Department of Fish and Game (June 10, 2011)
- Southern California Edison, Project Applicant (June 14, 2011)

1.4 Findings

The CPUC has found, on the basis of the Final MND and the whole record before it (including the Project application materials; California Energy Commission's September 8, 2010, Commission Decision for the AMSP (CEC-800-2010-008 – CMF, Docket Number 09-AFC-5), three-part Supplemental Staff Assessment for the AMSP,[1] and March 15, 2010, Staff Assessment for the AMSP (CEC-700-2010-003); the Department of Energy's July 8, 2011, Final Environmental Assessment (EA) and Finding of No Significant Impact for the Department of Energy Loan Guarantee to Mojave Solar, LLC for the Abengoa Mojave Solar Project near Barstow, California, as well as the April 4, 2011, Draft EA; the CPUC's Draft IS/MND, public comments received, and other materials), that there is no substantial evidence that the Project may have a significant effect on the environment. Project features and mitigation measures identified in the Final MND and required as a condition of certification of approval for the Project would avoid or reduce all of the impacts of the Project to a less-than-significant level.

Iain Fisher,
CPUC Project Manager, Energy Division
California Public Utilities Commission

July 14 2011
Date

[1] Supplemental Staff Assessment - Part A was issued on May 12, 2010 (CEC-700-2010-003 - SUPA); Supplemental Staff Assessment - Part B was issued on May 25, 2010 (CEC-700-2010-003 - SUPB); and Supplemental Staff Assessment - Part C was issued in June 2010 (CEC-700-2010-003 - SUPC).

CHAPTER 2
Comments and Responses

This chapter lists the public agencies and other entities that provided comments on the Draft IS/MND in Section 2.1; provides copies of written comments received, and responds to those comments in Section 2.2; and identifies other minor revisions initiated by the CPUC that clarify statements made in the Draft IS/MND or correct grammatical or editorial errors and/or minor inaccuracies or omissions. The CPUC-initiated revisions are provided in Section 2.3.

The purposes of reviewing a Draft IS/MND include checking for accuracy, detecting omissions and discovering public concerns. Where the text of the Draft IS/MND has been revised in response to a comment or concern, the revised text is included as part of the response with revisions shown using the following conventions: text changes are shown in indented paragraphs, added text is indicated by **bold underline** and deleted text is indicated by ~~**bold strikethrough**~~.

2.1 List of Comment Letters Received

The CPUC received six comment letters on the Draft IS/MND – five from public agencies, and one from the Applicant – each of which is identified in Table 2-1. Letters are identified in the order in which they were received. No letters were received from private individuals.

TABLE 2-1
LIST OF WRITTEN COMMENTERS

Letter	Commenter	Date of Letter
1	Native American Heritage Commission	May 27, 2011
2	Lahontan Regional Water Quality Control Board	June 6, 2011
3	Department of Toxic Substances Control	June 3, 2011
4	Mojave Desert Air Quality Management District	May 31, 2011
5	California Department of Fish and Game	June 10, 2011
6	Southern California Edison (Applicant)	June 14, 2011

2.2 Responses to Comments

As required by CEQA, the responses to comments address significant environmental issues raised by commenters during the review period (Pub. Res. Code § 21091(d); CEQA Guidelines §§ 15088(a), 15132). This section contains responses to all such comments. Each comment letter

was assigned a number (see Table 2-1). Each substantive comment then was assigned a comment number. For example, the first letter's fourth comment is designated Comment 1-4. On the following pages of this section, each comment letter is reproduced in its entirety, followed by the response to each comment within the letter.

Comment Letter 1

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

May 27, 2011

Mr. Iain Fisher, Environmental Project Manager
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Re: SCH#2011051041; CEQA Notice of Completion; proposed Mitigated Negative Declaration for the: **"Lockhart Subtation/Abengoa Mojave Solar Project SPS Upgrades Project (A11-05-006) (Transmission Gen-ties, other components);"** located in the Mojave Desert; San Bernardino County, California

Dear Mr. Fisher:

The Native American Heritage Commission (NAHC), the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources. The NAHC wishes to comment on the above-referenced proposed Project.

This letter includes state and federal statutes relating to Native American historic properties of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC Sacred Lands File (SLF) search resulted in; **Native American cultural resources were not identified** within the 'area of potential effect (APE), based on the USGS coordinates of the project location provided.. The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254.10. 1-1

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway. Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to 1-2

obtain their recommendations concerning the proposed project. Pursuant to C"A Public Resources Code § 5097.95, the NAHC requests that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and Section 2183.2 that requires documentation, data recovery of cultural resources. 1-2 cont.

Furthermore we recommend, also, that you contact the California Historic Resources Information System (CHRIS) California Office of Historic Preservation for pertinent archaeological data within or near the APE, at (916) 445-7000 for the nearest Information Center in order to learn what archaeological fixtures may have been recorded in the APE. 1-3

Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. 1-4

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

The response to this search for Native American cultural resources is conducted in the NAHC Sacred Lands Inventory, established by the California Legislature (CA Public Resources Code 5097.94(a) and is exempt from the CA Public Records Act (c.f. California Government Code 6254.10) although Native Americans on the attached contact list may wish to reveal the nature of identified cultural resources/historic properties. Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places and there may be sites within the APE eligible for listing on the California Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

Native American Contact List
San Bernardino County
May 27, 2011

Comment Letter 1

Ramona Band of Cahuilla Mission Indians
Joseph Hamilton, Chairman
P.O. Box 391670 — Cahuilla
Anza , CA 92539
admin@ramonatribe.com
(951) 763-4105
(951) 763-4325 Fax

San Fernando Band of Mission Indians
John Valenzuela, Chairperson
P.O. Box 221838 — Fernandeño
Newhall , CA 91322 — Tataviam
tsen2u@hotmail.com — Serrano
(661) 753-9833 Office — Vanyume
(760) 885-0955 Cell — Kitanemuk
(760) 949-1604 Fax

San Manuel Band of Mission Indians
James Ramos, Chairperson
26569 Community Center Drive — Serrano
Highland , CA 92346
(909) 864-8933
(909) 864-3724 - FAX
(909) 864-3370 Fax

AhaMaKav Cultural Society, Fort Mojave Indian
Linda Otero, Director
P.O. Box 5990 — Mojave
Mohave Valley AZ 86440
(928) 768-4475
LindaOtero@fortmojave.com
(928) 768-7996 Fax

Chemehuevi Reservation
Charles Wood, Chairperson
P.O. Box 1976 — Chemehuevi
Chemehuevi Valley CA 92363
chair1cit@yahoo.com
(760) 858-4301
(760) 858-5400 Fax

Morongo Band of Mission Indians
Michael Contreras, Cultural Heritage Prog.
12700 Pumarra Road — Cahuilla
Banning , CA 92220 — Serrano
(951) 201-1866 - cell
mcontreras@morongo-nsn.gov
(951) 922-0105 Fax

Fort Mojave Indian Tribe
Tim Williams, Chairperson
500 Merriman Ave — Mojave
Needles , CA 92363
(760) 629-4591
(760) 629-5767 Fax

San Manuel Band of Mission Indians
Ann Brierty, Policy/Cultural Resources Departmen
26569 Community Center. Drive — Serrano
Highland , CA 92346
(909) 864-8933, Ext 3250
abrierty@sanmanuel-nsn.gov
(909) 862-5152 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Lockhart Substation / abengoa Mojave Solar Project SPS Upgrades Project (A11-05-006); located in the Mojave Desert; San Bernardino County, California.

Native American Contact List
San Bernardino County
May 27, 2011

Comment Letter 1

Fort Mojave Indian Tribe
Nora McDowell, Cultural Resources Coordinator
500 Merriman Ave — Mojave
Needles , CA 92363
g.goforth@fortmojave.com
(760) 629-4591
(760) 629-5767 Fax

Ernest H. Siva
Morongo Band of Mission Indians Tribal Elder
9570 Mias Canyon Road — Serrano
Banning , CA 92220 — Cahuilla
siva@dishmail.com
(951) 849-4676

Serrano Nation of Indians
Goldie Walker
P.O. Box 343 — Serrano
Patton , CA 92369

(909) 862-9883

Kern Valley Indian Council
Robert Robinson, Co-Chairperson
P.O. Box 401 — Tubatulabal
Weldon , CA 93283 — Kawaiisu
brobinson@iwvisp.com — Koso
(760) 378-4575 (Home) — Yokuts
(760) 549-2131 (Work)

Fort Mojave Indian Tribe
Esadora Evanston, Environmental Coordinator
500 Merriman Ave — Mojave
Needles , CA 92363
region9epa@ftmojave.com
(760) 326-1112
(760) 629-4591
(760) 629-5767 Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Lockhart Substation / abengoa Mojave Solar Project SPS Upgrades Project (A11-05-006); located in the Mojave Desert; San Bernardino County, California.

Letter 1: Native American Heritage Commission

Response 1-1 Comment that no Native American cultural resources were identified within the Area of Potential Effects is noted. Draft IS/MND Section 3.5, *Cultural Resources* (p. 3.5-2), confirms that a Native American Heritage Commission (NAHC) Sacred Lands File search was conducted for the Project.

Response 1-2 The recommendation that contact be made with the Native American representatives is acknowledged. Draft IS/MND Section 3.5, *Cultural Resources* (p. 3.5-2), confirms that contact was made with local Native American groups and interested parties, and that two responses were received. One of the respondents, the Kern Valley Indian Council, is on the Native American Contact List for San Bernardino County, which was provided by the Commenter.

Response 1-3 Literature and records searches, including of the California Historical Resources Information System (CHRIS), occurred for this Project. See, Draft IS/MND, p. 3.5-1, incorporating by reference the California Energy Commission (CEC) Staff Assessment, p. 5.3-13.

Response 1-4 Consultation with tribes and interested Native American consulting parties occurred as appropriate for this Project, including in accordance with the National Environmental Policy Act (NEPA) and the National Historic Preservation Act (NHPA). See, e.g., Draft IS/MND, p. 3.5-1, incorporating by reference Section 3.9 of the Department of Energy Environmental Assessment (DOE EA).

California Regional Water Quality Control Board
Lahontan Region

Linda S. Adams
Acting Secretary for Environmental Protection

Victorville Office
14440 Civic Drive, Suite 200, Victorville, California 92392
(760) 241-6583 • Fax (760) 241-7308
www.waterboards.ca.gov/lahontan

Edmund G. Brown Jr.
Governor

June 6, 2011

File: Environmental Doc Review
San Bernardino County

Iain Fisher
Lockhart Substation Project
c/o Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104-4207
Email: lockhart@esassoc.com

COMMENTS ON THE DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION FOR CONSTRUCTION OF SOUTHERN CALIFORNIA EDISON'S LOCKHART SUBSTATION PROJECT, CALIFORNIA PUBLIC UTILITIES COMMISSION APPLICATION NO. A11-05-006, SAN BERNARDINO COUNTY

California Regional Water Quality Control Board, Lahontan Region (Water Board) staff has reviewed the Draft Initial Study/Mitigated Negative Declaration (IS/MND), received on May 17, 2011, for Southern California Edison's (SCE's) Lockhart Substation Project (Project). The proposed Project is to construct the Lockhart Substation and associated infrastructure to interconnect the Abengoa Mojave Solar Project (AMSP) to the existing Coolwater-Kramer No. 1 transmission line in San Bernardino County. The Draft IS/MND was prepared for the California Public Utilities Commission (CPUC) and submitted as part of CPUC Application A11-05-006, which was filed on May 5, 2011. The Draft IS/MND included a narrative review of the potentially significant impacts on the environment due to this Project and proposed mitigation measures to reduce those potentially significant impacts to a less than significant level.

Pursuant to CEQA Guidelines, California Code of Regulations (CCR), title 14, section 15096, responsible agencies must specify the scope and content of the environmental information germane to their statutory responsibilities. Water Board staff, acting as a responsible agency, has reviewed the above-referenced document in context as to how well the proposed project protects water quality, and ultimately, the beneficial use of waters of the State. We hope that CPUC will consider our comments and value our position with respect to protecting and maintaining water quality.

PROJECT OVERVIEW

Components of SCE's Lockhart Substation Project include: 1) the construction of a new 220 kilovolt substation on a 10-acre site located within the boundaries of the AMSP; 2) the installation of up to 30 new steel or concrete conductor mono-poles; 3) the construction of approximately 3,000 linear feet of overhead transmission line segments (comprised of two single line segments, each 1,500 feet in length) and associated access/maintenance road;

Comment Letter 2

4) the installation of up to 400 linear feet of underground conduit; and 5) the installation of up to 100 miles of new fiber optic cables, installation would be partly co-located on existing overhead transmission and distribution lines, partly on new wooden poles, and partly through new and existing underground conduits. The Project site is located in unincorporated areas of San Bernardino County, with portions of the fiber-optic alignment passing through the cities of Adelanto, Victorville, and Barstow and, in-part, crossing Bureau of Land Management administered public lands.

AUTHORITY

State law assigns responsibility for protection of water quality in the Lahontan region to the Lahontan Water Board. The *Water Quality Control Plan for the Lahontan Region* (Basin Plan) contains policies that the Water Board uses with other laws and regulations to protect water quality within the region. All surface waters are considered waters of the State, which include, but are not limited to, drainages, streams, washes, ponds, pools, or wetlands, and may be permanent or intermittent. All waters of the State are protected under California law. Additional protection is provided for waters of the U.S, under the Federal Clean Water Act. Based on our review of the DEIR, project components may involve alteration, dredging, filling, and/or excavating activities in waters of the State. Such activities constitute a discharge of waste[1], as defined in California Water Code (CWC), section 13050, and could affect the quality of waters of the State.

The State Water Resources Control Board (State Water Board) and the Lahontan Water Board regulate discharges of waste in order to protect the water quality and, ultimately, the beneficial uses of waters of the State. The Basin Plan provides guidance regarding water quality and how the Lahontan Water Board may regulate activities that have the potential to affect water quality within the region. The Basin Plan includes prohibitions, water quality standards, and policies for implementation of standards. The Basin Plan can be accessed via the Water Board's web site (http://www.waterboards.ca.gov/lahontan/water_issues/programs/basin_plan/references.shtml).

We request that the Project proponent comply with all applicable water quality standards and prohibitions, including provisions of the Basin Plan, for implementation of the Project. 2-1

PERMITTING REQUIREMENTS

A number of activities associated with the proposed development may require permits issued by either the State Water Board or Lahontan Water Board because they appear to have the potential to impact waters of the State. The required permits may include:

- Land disturbance of more than 1 acre may require a CWA, section 402(p) stormwater permits, including a National Pollutant Discharge Elimination System (NPDES) General Construction Stormwater Permit, obtained from the State Water Board, or an individual stormwater permit obtained from the Lahontan Water Board;

[1] "Waste" is defined in the Basin Plan to include any waste or deleterious material including, but not limited to, waste earthen materials (such as soil, silt, sand, clay, rock, or other organic or mineral material) and any other waste as defined in the California Water Code, section13050(d).

Comment Letter 2

- Depending on the standard industrial classification (SIC) code for industrial-type activities associated with the Project, an NPDES General Industrial Stormwater Permit, obtained from the State Water Board, may be required for the Project; and

- Streambed alteration and/or discharge of fill material to a surface water may require a CWA, section 401 water quality certification (WQC) for impacts to federal waters (waters of the U.S.), or Waste Discharge Requirements for impacts to non-federal waters, both issued by the Lahontan Water Board.

Some waters of the State are "isolated" from waters of the U.S. Determinations of the jurisdictional extent of the waters of the U.S. are made by the United States Army Corps of Engineers (USACE). Projects that have the potential to impact surface waters will require the appropriate jurisdictional determinations. These determinations are necessary to discern if the proposed surface water impacts will be regulated under section 401 of the CWA or through dredge and fill WDRs issued by the Water Board.

We request that project proponent consult with the USACE and perform the necessary jurisdictional determinations for surface waters within the Project area. 2-2

In addition, we request that the environmental document list the permits that may be required, as outlined above, and identify the specific activities that may trigger these permitting actions in the appropriate sections of the environmental document. 2-3

Information regarding these permits, including application forms, can be downloaded from our web site at http://www.waterboards.ca.gov/lahontan/. The Project proponent is urged to consult with Water Board staff early to discern what permitting requirements may be required for this Project. 2-4

POTENTIAL IMPACTS TO SURFACE WATERS

Surface waters are a significant resource, which perform a variety of important hydrologic and biogeochemical functions that affect water quality. In particular, floodplains and riparian areas associated with both perennial streams and ephemeral drainages provide a natural buffer and help mitigate and control water quality impacts by attenuating flood flows and removing pollutants and sediment from surface runoff.

For projects that have the potential to impact surface water resources, the Water Board prefers avoidance of disturbance to disturbance followed by mitigation such as restoration or creation. In our review of projects with potential surface water impacts, the Water Board follows the sequence of avoid, minimize, and mitigate. If the proposed Project impacts surface water resources, the Project proponent must perform a thorough analysis of Project alternatives and demonstrate to the Water Board that surface water impacts are not avoidable. If the impacts are not avoidable, the Project proponent must then demonstrate that the impacts to the surface water resources are the minimum necessary for the Project. The Project proponent must then propose mitigation to compensate for any surface water impacts. 2-5

POTENTIAL IMPACTS TO WATER QUALITY AND STORMWATER MANAGEMENT

Water quality impacts can result from stormwater runoff from nonpoint sources. Concerns for this Project include the potential to introduce petroleum hydrocarbons, volatile organic 2-6

Comment Letter 2

compounds, and metals from vehicle parking lots and materials and heavy equipment storage areas. The environmental document must provide specific information regarding the stormwater mitigation controls that will be implemented to ensure that pollutants do not enter surface water areas. Please ensure that Best Management Practices (BMPs) are utilized to keep these constituents of concern from impacting waters of the state. 2-6 cont.

Post-construction stormwater management must be considered a significant component in the environmental review process. Of particular concern is the collection of stormwater runoff and the discharge of that stormwater to natural drainage channels. The environmental document must evaluate all potential stormwater impacts, particularly potential post-construction hydrologic impacts, and describe specific BMPs that, when implemented, will reduce those potential impacts to a less than significant level. Where feasible, we request that the Project proponent consider design alternatives that redirect these flows from surface waters to areas where they will dissipate by percolation into the landscape. 2-7

LOW IMPACT DEVELOPMENT STRATEGIES

The foremost method of reducing impacts to surface waters and groundwater from urban development is "Low Impact Development" (LID), the goals of which are maintaining a landscape functionally equivalent to predevelopment hydrologic conditions and minimal generation of nonpoint source pollutants. LID results in less surface runoff and potentially less impacts to receiving waters, the principles of which include:

- Maintaining natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge;
- Reducing the impervious cover created by development and the associated transportation network; and
- Managing runoff as close to the source as possible.

We understand that LID development practices that would maintain aquatic values could also reduce local infrastructure requirements and maintenance costs, and could benefit air quality, open space, and habitat. Vegetated areas for stormwater management and infiltration onsite are valuable in LID and may enhance the aesthetics of the property.

We request that the Project proponent establish distinct LID implementation measures and incorporate these principles into the proposed Project design. 2-8

Please note that obtaining a permit and conducting monitoring does not constitute adequate mitigation. Development and implementation of acceptable mitigation is required. The environmental document must specifically describe the BMPs and other measures used to mitigate project impacts. 2-9

Comment Letter 2

If you have any questions, please do not hesitate to contact me at (760) 241-7376 (jzimmerman@waterboards.ca.gov) or Patrice Copeland, Senior Engineering Geologist, at (760) 241-7404 (pcopeland@waterboards.ca.gov).

Sincerely,

Jan M. Zimmerman, PG
Engineering Geologist

cc: Janna Scott, ESA
(via email jscott@esassoc.com)
State Clearinghouse

JZ\rc\U:\CEQA Review\SEC Lockhart_MND.DOC

Letter 2: Lahontan Regional Water Quality Control Board

Response 2-1 As indicated in Draft IS/MND Section 3.9.5, *References*, the provisions of the Lohantan Regional Water Quality Control Board's Water Quality Control Plan for the Lahontan Region (Basin Plan), as amended, was considered in the CPUC's analysis of Project impacts. The CPUC's compliance with CEQA in the Draft IS/MND does not affect SCE's independent obligation to comply with applicable laws. The request that SCE comply with all applicable water quality standards and prohibitions, including the provisions of the Basin Plan, is noted.

Response 2-2 As indicated in Draft IS/MND Section 3.9, *Hydrology and Water Quality* (p. 3.9-2), the U.S. Army Corps of Engineers (USACE) determined that there are no waters of the U.S. present on the AMSP/Lockhart Substation site and a wetlands delineation related to the proposed fiber-optic routes identified the collective area of potential jurisdictional waters of the U.S. as 20.44 acres.

Response 2-3 As stated on page 3.9-6 of the Draft IS/MND, "The AMSP would be subject to the SWPPP, construction storm water permit, and industrial stormwater permit issued by the Lahontan RWQCB and also would comply with the Lahontan RWQCB Waste Discharge Requirements for storm water management system on the Lockhart Substation site…. A separate SWPPP (discharge of storm water), Notice of Intent for construction storm water permit, and Waste Discharge Requirements may be required for the proposed fiber-optic communication system." These permits and associated triggering events are identified in the IS/MND. See, e.g., Draft IS/MND, p. 3.9-1, which incorporates by reference the CEC Staff Assessment (see, e.g., CEC Staff Assessment, *Soil & Water Table 1, Laws, Ordinances, Regulations, and Standards*, p. 5.9-5). Because potentially applicable permits, including those identified in Comment 2-3, are identified in the Draft IS/MND and information about them is provided in the record as a whole, no change has been made in response to this comment.

Response 2-4 The recommendation that SCE consult with RWQCB staff is noted. As indicated in Response 2-3, SCE would be subject to applicable permit requirements.

Response 2-5 As indicated in Responses to Comment 2-1 and Comment 2-3, SCE remains subject to applicable legal requirements. Water Board staff's preference for avoidance to disturbance followed by the implementation of mitigation measures is noted. Because this comment does not question the adequacy or accuracy of the analysis in the draft IS/MND, no change has been made in response to it.

Response 2-6 As stated on page 3.9-5 of the Draft IS/MND, AMP HYDRO-1 would result in construction equipment being kept out of flowing stream channels as feasible. Other specific information about the environmental protection measures, design measures and BMPs (including those that address potential impacts to stormwater)

that will be implemented are set forth in Draft IS/MND Appendix B Table B-2 and in CEC Commission Decision Section VI(B) (see, e.g., Condition of Certification SOIL&Water-1, SOIL&Water-2, and SOIL&Water-3, p. 331 et seq.).

Response 2-7 Stormwater management, including the redirection of flows to areas where they will dissipate by percolation into the landscape, has been considered in the environmental analysis. As stated on Draft IS/MND pages 3.9-5 and 3.9-6, compliance with the terms and conditions associated with the SWPPP, construction storm water permit, industrial stormwater permit and Waste Discharge Requirements for the storm water management system issued by the Lahontan RWQCB, including standard BMPs, would assure no violation of any water quality standards or waste discharge requirements on the AMSP/Lockhart Substation site and that impacts relating to stormwater would be less than significant, including impacts relating to post-construction stormwater management. See Draft IS/MND, page 3.9-5, which incorporates by reference CEC Commission Decision Section VI(B) (p. 306 et seq.); CEC Staff Assessment Section 5.9 (pp. 5.9-13 to 5.9-78), and CEC SSA Part C Appendix A Section 3.8 (p. A-40 et seq.). As described in these analyses, post-construction storm flows would be intercepted, conveyed around the site perimeter, and returned to historical flow locations and parameters or managed through internal drainage facilities designed to capture and treat stormwater and allow it to percolate or evaporate. As described in the Draft IS/MND on pages 3.9-8 and 3.9-9, the Drainage, Erosion, and Sediment Control Plan (DOE EA, Appendix E) includes a comprehensive system of management controls, including site-specific BMPs, that would minimize impacts associated with construction-related stormwater. As described on Draft IS/MND page 3.9-9, construction, operation, and maintenance of the Project would not exceed the capacity of the stormwater drainage systems or provide substantial additional sources of polluted runoff. BMPs to reduce potential impacts from stormwater are detailed in CEC SSA Part C Appendix A (pp. A-41 to A-43) and are incorporated by reference in the Draft IS/MND (p. 3.9-6).

Response 2-8 The Project analyzed in the Draft IS/MND did incorporate principles of Low Impact Development (LID), including stormwater retention, percolation, and evaporation, as described in Response 2-7. Additionally, as described in Response 2-7, stormflows generated off-site that intercept the Project site would be conveyed around the site perimeter and returned to historical flow locations and parameters. Other features incorporated into the project include, but are not limited to, project facilities matching existing topography, use of berms to contain storm runoff, and stormwater drainage systems that utilize ponds and swales from which the water would percolate or evaporate. See, e.g., Draft IS/MND, p. 3.9-5, which incorporates by reference CEC Commission Decision Section VI(B) (p. 306 et seq.); CEC Staff Assessment Section 5.9 (pp. 5.9-13 to 5.9-78), and CEC SSA Part C Appendix A Section 3.8 (p. A-40 et seq.).

Response 2-9 Compliance with applicable laws, including permit requirements, can provide a basis for determining that a project will not cause a significant effect on the environment. *Tracy First v. City of Tracy*, 177 Cal.App.4th 912 (2009). For example, in *Leonoff v. Monterey County Board of Supervisors*, 222 CalApp.3d 1337 (1990), the court upheld an MND for a contractors' service center that included, among other mitigation measures, a requirement that the project comply with applicable laws related to the registration of hazardous materials and monitoring of underground storage tanks for leaks. As indicated in Response 2-6, the BMPs, other actions and mitigation measures that would address Project impacts are described in the Draft IS/MND. The comment does not identify any particular mitigation measure or measures in the Draft IS/MND as insufficient to avoid or reduce Project impacts as analyzed in the document.

Comment Letter 3

Department of Toxic Substances Control

Deborah O. Raphael, Director
5796 Corporate Avenue
Cypress, California 90630

Linda S. Adams
Acting Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

June 3, 2011

Mr. Ian Fisher, Environmental Project Manager
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION FOR THE SOUTHERN CALIFORNIA EDISON'S LOCKHART SUBSTATION PROJECT, (SCH#2011051041), SAN BERNARDINO COUNTY

Dear Mr. Fisher:

The Department of Toxic Substances Control (DTSC) has received your submitted draft Initial Study (IS) and a draft Mitigated Negative Declaration (MND) for the above-mentioned project. The following project description is stated in your document: "Southern California Edison (SCE), in its California Public Commission (CPUC) application (A.11-05-006), filed on May 5, 2011, request a Permit to Construct (PTC) a new 220 kilovolt (kV) substation (Lockhart Substation) and associated transmission lines, generation-tie lines (gen-tie) distribution facilities, and fiber optic telecommunications links to various substations in San Bernardino County. The Lockhart Substation Project (herein called the Project) would allow the Abengoa Mojave Solar Project (AMSP) proposed by Mojave Solar, LLC (Mojave Solar) to connect and deliver solar generation to the power grid. The proposed Lockhart Substation and interconnection to the adjacent SCE power lines would be located on the 1,765-acre AMSP site (near Harper Lake) and the land adjacent and south, where it connects to the existing east-west power lines. Portions of the fiber optic routes pass through the cities of Adelanto, Victorville and Barstow and cross Bureau of Land Management (BLM)-administered lands. New right-of way would be required to construct, operate or maintain the Project. Portions of the Project would be located within or adjacent to land designated as open space, agriculture, or rural residential. The Lockhart Substation site was previously used for agricultural operations and cattle ranching. The existing land uses along the Lockhart to Kramer Substation fiber-optic line include mostly open space with limited agriculture and scattered rural residential uses".

Based on the review of the submitted document DTSC has the following comments:

1) The MND should evaluate whether conditions within the Project area may pose a threat to human health or the environment. Following are the databases of some of the regulatory agencies:

- National Priorities List (NPL): A list maintained by the United States Environmental Protection Agency (U.S.EPA).
- Envirostor (formerly CalSites): A Database primarily used by the California Department of Toxic Substances Control, accessible through DTSC's website (see below).
- Resource Conservation and Recovery Information System (RCRIS): A database of RCRA facilities that is maintained by U.S. EPA.
- Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS): A database of CERCLA sites that is maintained by U.S.EPA.
- Solid Waste Information System (SWIS): A database provided by the California Integrated Waste Management Board which consists of both open as well as closed and inactive solid waste disposal facilities and transfer stations.
- GeoTracker: A List that is maintained by Regional Water Quality Control Boards.
- Local Counties and Cities maintain lists for hazardous substances cleanup sites and leaking underground storage tanks.
- The United States Army Corps of Engineers, 911 Wilshire Boulevard, Los Angeles, California, 90017, (213) 452-3908, maintains a list of Formerly Used Defense Sites (FUDS).

3-1

2) The MND should identify the mechanism to initiate any required investigation and/or remediation for any site within the proposed Project area that may be contaminated, and the government agency to provide appropriate regulatory oversight. If necessary, DTSC would require an oversight agreement in order to review such documents. Please note that soil contamination has been found on the Abengoa Mojave Solar Project (AMSP) site. DTSC recommends that the project proponent coordinate with AMSP officials regarding soil contamination.

3-2

3) Any environmental investigations, sampling and/or remediation for a site should be conducted under a Workplan approved and overseen by a regulatory agency that has jurisdiction to oversee hazardous substance cleanup. The findings of any investigations, including any Phase I or II Environmental Site Assessment Investigations should be summarized in the document. All sampling results in which hazardous substances were found above regulatory standards should be clearly summarized in a table. All closure, certification or remediation approval reports by regulatory agencies should be included in the MND. 3-3

4) If buildings, other structures, asphalt or concrete-paved surface areas are being planned to be demolished, an investigation should also be conducted for the presence of other hazardous chemicals, mercury, and asbestos containing materials (ACMs). If other hazardous chemicals, lead-based paints (LPB) or products, mercury or ACMs are identified, proper precautions should be taken during demolition activities. Additionally, the contaminants should be remediated in compliance with California environmental regulations and policies. 3-4

5) Future project construction may require soil excavation or filling in certain areas. Sampling may be required. If soil is contaminated, it must be properly disposed and not simply placed in another location onsite. Land Disposal Restrictions (LDRs) may be applicable to such soils. Also, if the project proposes to import soil to backfill the areas excavated, sampling should be conducted to ensure that the imported soil is free of contamination. 3-5

6) Human health and the environment of sensitive receptors should be protected during any construction or demolition activities. If necessary, a health risk assessment overseen and approved by the appropriate government agency should be conducted by a qualified health risk assessor to determine if there are, have been, or will be, any releases of hazardous materials that may pose a risk to human health or the environment. 3-6

7) If the site was used for agricultural, livestock or related activities, onsite soils and groundwater might contain pesticides, agricultural chemical, organic waste or other related residue. Proper investigation, and remedial actions, if necessary, should be conducted under the oversight of and approved by a government agency at the site prior to construction of the project. 3-7

8) If it is determined that hazardous wastes are, or will be, generated by the proposed operations, the wastes must be managed in accordance with the California Hazardous Waste Control Law (California Health and Safety Code, Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (California Code of Regulations, Title 22, Division 4.5). If it is determined that hazardous wastes will be generated, the facility should also obtain a United States Environmental Protection Agency Identification Number by contacting (800) 618-6942. Certain hazardous waste treatment processes or hazardous 3-8

materials, handling, storage or uses may require authorization from the local Certified Unified Program Agency (CUPA). Information about the requirement for authorization can be obtained by contacting your local CUPA. 3-8 cont.

9) DTSC can provide cleanup oversight through a Voluntary Cleanup Agreement (VCA). For additional information on the VCA, please see www.dtsc.ca.gov/SiteCleanup/Brownfields, or contact Ms. Maryam Tasnif-Abbasi, DTSC's Voluntary Cleanup Coordinator, at (714) 484-5489. 3-9

If you have any questions regarding this letter, please contact Rafiq Ahmed, Project Manager, at rahmed@dtsc.ca.gov, or by phone at (714) 484-5491.

Sincerely,

Greg Holmes
Unit Chief
Brownfields and Environmental Restoration Program

cc: Governor's Office of Planning and Research
State Clearinghouse
P.O. Box 3044
Sacramento, California 95812-3044
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CEQA Tracking Center
Department of Toxic Substances Control
Office of Environmental Planning and Analysis
P.O. Box 806
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CEQA # 3226

Letter 3: Department of Toxic Substances Control

Response 3-1 The Draft IS/MND did analyze potential impacts related to human health and the environment. For example, in Draft IS/MND Section 3.18, *Mandatory Findings of Significance* (p. 3.18-15 et seq.), the analysis responds to the following question: "Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?" and concludes that the Project would cause a less-than-significant impact with mitigation incorporated. Potential impacts to human health also are evaluated in Draft IS/MND Section 3.3, *Air Quality*, and Section 3.7, *Hazards and Hazardous Materials*, Section 3.8, *Greenhouse Gas Emissions*, and Section 3.12, *Noise*. Each of the sections in Chapter 3, *Environmental Checklist and Discussion*, evaluates potential impacts to the environment. The selection of regulatory agency databases provided in the comment is noted.

Response 3-2 Draft IS/MND Section 3.7, *Hazards and Hazardous Materials*, explains what would occur in the event that contamination is identified on the Project site, including DTSC involvement as necessary. See, e.g., page 3.7-10, which states: "There may be some existing contamination at the Lockhart Substation site. Pursuant to CEC Conditions of Certification, if visual contamination indicators are observed during construction, the contractor would be required to stop work until the material is properly characterized and appropriate measures are taken to protect human health and the environment. A Professional Engineer or Professional Geologist shall inspect the site, determine what is required to characterize the nature and extent of contamination, and provide a report to the CPUC and DTSC with findings and recommended actions." The recommendation that SCE "coordinate with AMSP officials regarding soil contamination" is noted.

Comment Letter 4

Mojave Desert Air Quality Management District
14306 Park Avenue, Victorville, CA 92392-2310
760.245.1661 • fax 760.245.2699
Visit our web site: http://www.mdaqmd.ca.gov
Eldon Heaston, Executive Director

May 31, 2011

Mr. Iain Fisher
Lockhart Substation Project
c/o Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104-4207

Project: Lockhart Substation Initial Study/Mitigated Negative Declaration

Dear Mr. Fisher:

The Mojave Desert Air Quality Management District (District) has received the Initial Study/Mitigated Negative Declaration for the proposed Lockhart Substation Project. The project includes construction of the Lockhart Substation Project to allow the Abengoa Mojave Solar Project to connect and deliver solar generation to the power grid to the electric grid. The project consists of construction, operation and maintenance of the Lockhart Substation, generation tie line connections, distribution facilities, transmission lines and telecommunications facilities.

The District noted that federal ozone attainment standard on page 3.3-5 in Table 3.3-2 should be updated to "Non-attainment; classified Severe-17." MDAQMD Designations and Classifications are available at http://www.mdaqmd.ca.gov/index.aspx?page=13

4-1

Thank you for the opportunity to review this planning document. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726, or Tracy Walters at extension 6122.

Sincerely,

Alan J. De Salvio
Supervising Air Quality Engineer

AJD/tw SCE Lockhart Substation.doc

Letter 4: Mohave Desert Air Quality Management District

Response 4-1 The federal ozone attainment standard on Draft IS/MND page 3.3-5 in Table 3.3-2 has been updated as requested:

TABLE 3.3-2
MDAQMD FEDERAL AND STATE ATTAINMENT STATUS

Pollutant	Federal	State
Ozone	~~**Moderate**~~ Non-attainment**;** **classified Severe-17**	Moderate Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxides (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Inhalable Particulates (PM10)	Moderate Nonattainment	Nonattainment
Fine Particulates (PM2.5)	Attainment	Nonattainment

NOTES: Attainment = Attainment or Unclassified, where Unclassified is treated the same as Attainment for regulatory purposes.

SOURCE**S**: CEC SSA, 2010, p. 5.1-6; **MDAQMD, 2011**.

Draft IS/MND Section 3.3.5, *References*, also has been revised to identify this comment letter as a source of information provided in Table 3.3-2. The change is as follows:

> **MDAQMD, 2011. Letter of A.J. De Salvio to I. Fisher, *Project: Lockhart Substation Initial Study/Mitigated Negative Declaration* (May 31, 2011).**

State of California -The Natural Resources Agency
DEPARTMENT OF FISH AND GAME
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Eastern Sierra - Inland Deserts Region (ESIDR)
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***EDMUND G. BROWN JR.**, Governor*
***JOHN McCAMMAN**, Director*

June 10, 2011

Mr. Iain Fisher
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

Subject: Lockhart Substation Project, Mitigated Negative Declaration, State Clearinghouse Number (SCH#) 2011051041

Dear Mr. Fisher:

The Department of Fish and Game (Department) has reviewed the Mitigated Negative Declaration (MND) for the above-referenced project prepared by the California Public Utilities Commission (CPUC). The proposed project is for the construction and operation of the Special Protection System (SPS) upgrades required to distribute solar power generated by the 250-megawatt (MW) Abengoa Mojave Solar Project to the electric grid. The proposed SPS facilities are approximately 85 miles long and include a new substation (Lockhart Substation), interconnection to the adjacent transmission lines, distribution system to provide substation light and power, and fiber-optic telecommunications links to various substations in the region. The project is along sections of State Highways 15, 18, 40, 58, and 395, portions of the fiber-optic routes pass through the cities of Adelanto, Victorville and Barstow and cross Bureau of Land Management (BLM)-administered lands in an unincorporated portion of San Bernardino County.

The Department is providing comments on the MND as the State agency which has the statutory and common law responsibilities with regard to fish and wildlife resources and habitats. California's fish and wildlife resources, including their habitats, are held in trust for the people of the State by the Department (Fish and Game Code §711.7). The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitats necessary for biologically sustainable populations of those species (Fish and Game Code §1802). The Department's Fish and wildlife management functions are implemented through its administration and enforcement of Fish and Game Code (Fish and Game Code §702). The Department is a trustee agency for fish and wildlife under the California Environmental Quality Act (see CEQA Guidelines, 14 Cal. Code Regs. §15386(a)). The Department is providing these comments in furtherance of these statutory responsibilities, as well as its common law role as trustee for the public's fish and wildlife.

The project is in the range of the desert tortoise (*Gopherus aggassizzi*), which is listed as threatened pursuant to both the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA; Division 3, Chapter 1.5 of the Fish and Game Code). It also is in the range of the Mohave ground squirrel (*Spermophilus mohavensis*) and Swainson's hawk (*Buteo swainsoni*), listed as threatened under CESA and the southwestern willow flycatcher (*Empidonax traillii*), listed as endangered under both ESA and CESA. Finally, the project occurs in the range of the burrowing owl (*Athene cunicularia*), which is a species of special concern and protected under Fish and Game Code §3503.5. 5-1

The Department offers the following comments and recommendations:

General and species-specific

1. The MND refers to the Department of Energy (DOE) Environmental Assessment (EA). The Department notes that the DEO EA incorporated by reference in the MND is in draft form and therefore subject to change, so it can not be assumed as stated on page B-6 of the MND that the DEO EA agency-implemented measures will be implemented as part of the Lockhart Substation Project. 5-2

2. The MND uses the term "clearance survey" for activities associated with the desert tortoise and Mohave ground squirrel. The term appears to imply that tortoises and Mohave ground squirrels will be moved if found on site. Capturing and movement of individuals of these listed species without an Incidental Take Permit issued by the Department would entail unauthorized "take", which is prohibited under CESA. Before moving these species, consultation with the Department pursuant to Fish and Code §2081(b) would be warranted. 5-3

3. Desert tortoise (Page 3.4-14 and 15) - The MND states that 429 acres of habitat would be adversely affected, due to varying quality of this habitat, the DOE determined that 118 acres of compensation lands would be required. It is not clear what criteria were used to determine the quality of habitat. Since presence is assumed as stated on page 3.4-14 of the MND, then all habitat is suitable and considered occupied. In addition it is not clear if the estimated 0.001-acre direct, permanent project impact to designated critical habitat includes the installation of 30 poles as well as the potential access and spur roads, crane pads, drainage improvements, and grading. It is also not clear what on what basis (e.g. mitigation ratio) the required acres of compensation lands was determined. 5-4

4. Mohave ground squirrel (Page 3.4-18) - The MND states that 430 acres of low-quality habitat would be adversely affected. It is not clear what habitat assessment was used to classify the quality of habitat and how mitigation 5-5

was determined for each habitat classification. In addition since presence is assumed as stated on page 3.4-17 of the MND, then all habitat within the project is suitable and should be considered occupied. 5-5 cont.

5. Burrowing owl (Page 3.4-19) – The MND states a preconstruction survey may be required by project-specific mitigations no more than 30 days prior to ground disturbing activity. If during the preconstruction survey burrowing owls are observed, mitigation measures for the burrowing owl would be appropriate. As compensation for the direct loss of burrowing owl nesting and foraging habitat, the Department recommends the MND includes a requirement that the project proponent shall mitigate by acquiring and permanently protecting known burrowing owl nesting and foraging habitat at the following ratio: 5-6

   a) Replacement of occupied habitat with occupied habitat at 1.5 times 6.5 acres per pair or single bird;

   b) Replacement of occupied habitat with habitat contiguous with occupied habitat at 2 times 6.5 acres per pair or single bird; and/or

   c) Replacement of occupied habitat with suitable unoccupied habitat at 3 times 6.5 acres per pair or single bird.

   Further, the Department recommends the MND require the project proponent establish a non-wasting endowment account for the long-term management of the acquired burrowing owl habitat for the benefit of burrowing owls. 5-7 The Department suggests the CPUC through the MND require DFG's concurrence on the project proponent's selected burrowing owl mitigation lands before the land is acquired, as well as on a long-term plan prepared by the proponent for managing the lands and its endowment. 5-8

   The Department recommends the MND require that all owls associated with occupied burrows that will be directly impacted (temporarily or permanently) by the project shall be relocated and the following measures shall be implemented to avoid direct take through injury or mortality during project operations: 5-9

   a) Occupied burrows shall not be disturbed during the nesting season of February 1 through August 31, unless a qualified biologist can verify through non-invasive methods that either the owls have not begun egg laying and incubation or that juveniles from the occupied burrows are foraging independently and are capable of independent flight.

   b) Owls must be relocated by a qualified biologist from any occupied burrows that will be impacted by project activities. Suitable habitat

must be available adjacent to or near the disturbance site or artificial burrows will need to be provided nearby. Once the biologist has confirmed that the owls have left the burrow, burrows should be excavated using hand tools and refilled to prevent reoccupation.

c) All relocation shall be approved in advance by the Department. The permitted biologist shall monitor the relocated owls a minimum of three days per week for a minimum of three weeks. A report summarizing the results of the relocation and monitoring shall be submitted to CPUC and the Department within 30 days following completion of the relocation and monitoring of the owls.

5-9 cont.

The Department recommends CPUC requires the project proponent prepare a Burrowing Owl Mitigation and Monitoring Plan and submit to the CPUC and the Department for review and approval prior to relocation of owls. The Department recommends the Burrowing Owl Mitigation and Monitoring Plan describe proposed relocation and monitoring plans, and include the number and location of occupied burrow sites and details on adjacent or nearby suitable habitat available to owls for relocation. In addition, if no suitable habitat is available near the project for relocation, the Department recommends the project proponent's Plan include details regarding the creation of artificial burrows (numbers, location, and type of burrows). The Plan should also describe proposed off-site areas to preserve to compensate for impacts to burrowing owls/occupied burrows at the project site.

5-10

Spread of Noxious Weeds

The spread of noxious weeds is a major threat to biological resources in the Mojave Desert, particularly where disturbance has occurred and is ongoing. The subject project appears to present the potential to introduce and increase the presence of noxious weeds in the project area and beyond, which can lead to a significant impact to native flora and fauna in the project area.

Noxious weeds are species of non-native plants included on the weed list of the California Department of Food and Agriculture (CDFA 2009), the California Invasive Plant Council (Cal-IPC 2006), or those weeds of special concern identified by BLM. Noxious weeds species that occur on the project site include Russian thistle (*Salsola tragus*), herb Sophia (*Descurania sophia*), Saharan mustard, London rocket (*Sisymbrium irio*), tamarisk, slender wild-oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *rubens*), cheat grass (*Bromus tectorum*), and hare barley (*Hordeum murinum*).

Non-native weeds frequently outcompete native plants resulting in several synergistic indirect effects: increased fire frequency by providing sufficient fuel to carry fires, especially in the inter-shrub spaces that are mostly devoid of native vegetation (Brown and Minnich 1986[1]; Brooks and Esque 2002[2]) as well as decreased quality and quantity of plant foods available to desert tortoises and other herbivores and thereby affecting their nutritional intake. Construction activities and soil disturbance under the proposed project could aid the transport and dispersal of invasive weed propagules, thereby potentially introducing new species of noxious weeds exacerbating invasions already present in the project vicinity. There are several species of noxious weeds within the proposed project area and within its immediate vicinity including Saharan mustard and split grass, two of several species that are rapidly spreading and invading the Mohave Desert.

6. The Department recommends CPUC requires the project proponent to ensure construction vehicles are inspected and washed, the project area is monitored for any weed invasions and any of these that are found be effectively eradicated, and temporarily disturbed areas be quickly revegeted.

7. To help ensure the project avoids causing the spread of noxious weeds, the following Best Management Practices are recommended during construction and operation to prevent the spread and propagation of noxious weeds:

   a. Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;

   b. Reestablish vegetation quickly on disturbed sites temporarily disturbed areas.

   c. Prevent spread of non-native plants via vehicular sources by implementing methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the construction site. The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s);

   d. Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations;

5-11

[1] Brown D.E., and R.A. Minnich. 1986. Fire changes in creosote bush scrub of the Western Sonoran Desert, California. American Midland Naturalist 116:411-422.
[2] Brooks, M.L., and T.C. Esque. 2002. Alien annual plants and wildfire in desert tortoise habitat: status, ecological effects, and management. Chelonian conservation and Biology 4:330-340.

e. Invasive non-native species shall not be used in landscaping plans and erosion control; and

f. Monitor and rapidly implement control measures to ensure early detection and eradication of weed invasions.

5-11 cont.

Vegetation, wetlands and streams

8. The Department recommends CPUC include a detailed vegetation map, preferably overlaid on an aerial photograph. The map should be of sufficient resolution to depict the locations of the project site's major vegetation communities. The vegetation classification used to name the polygons should be described.

5-12

9. As trustee agency for fish and wildlife resources, the Department has responsibility to help ensure the protection and enhancement of conserve wetland and riparian habitats. It is the policy of the Fish and Game Commission (Commission) to strongly discourage development in wetlands or conversion of wetlands to uplands. In addition, the Commission and the Department in implementing the Commission's policies opposes development or conversion which would result in a reduction of wetland acreage or wetland habitat values, unless, at a minimum, project mitigation assures there will be "no net loss" of either wetland habitat values or acreage. As such, the Department recommends the CPUC ensures the MND demonstrate that the project will not result in a net loss of wetland habitat values or acreage.

5-13

Toward this end, the Department recommends that CPUC requires the project proponent provide a jurisdictional delineation of lakes, streams, associated riparian habitats and other wetland features potentially affected by the project for agency and public review. This report should include a jurisdictional delineation that includes wetlands identification pursuant to the U. S. Fish and Wildlife Service wetland definition[3] as adopted by the Commission and the Department[4]. Please note that some wetland and riparian habitats subject to the Department's authority may extend beyond the jurisdictional limits of the U.S. Army Corps of Engineers. The jurisdictional delineation should also include mapping of ephemeral, intermittent, and perennial stream courses potentially impacted by

5-14

[3] Cowardin, Lewis M., et al. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Department of the Interior, Fish and Wildlife Service.

[4] California Fish and Game Commission Policies: Wetlands Resources Policy; Wetland Definition, Mitigation Strategies, and Habitat Value Assessment Strategy; Amended 1994

the project. In addition to federally protected wetlands, the Department considers impacts to wetlands (as defined by the Commission) potentially significant.

5-14 cont.

10. The project proponent must notify the Department as the project may require a Lake or Streambed Alteration Agreement, pursuant to Fish and Game Code §§1600 *et seq.*, Notification by the project proponent would be warranted prior to commencement of any activity that would substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank (which may include associated riparian resources) of a river, stream or lake, or use material from a streambed. The Department's issuance of a Lake or Streambed Alteration Agreement for a project that is subject to CEQA will require CEQA compliance actions by the Department as a responsible agency. The Department as a responsible agency under CEQA may consider the local jurisdiction's (lead agency) Negative Declaration or Environmental Impact Report for the project. To minimize additional requirements by the Department pursuant to Fish and Game Code §§1600 *et seq.* and/or CEQA, the document should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring and reporting commitments for issuance of the agreement.

5-15

11. To help CPUC ensure the proposed project avoids significant impacts (including take) to breeding birds, the Department recommends its activities (including disturbances to native and non-native vegetation and man-made nesting substrates) occur outside of the bird breeding season, which generally runs from March 1-September 15 (as early as February 1 for raptors). Take includes disturbances which would cause abandonment of active nests containing eggs and/or young.

    If the project activities cannot feasibly avoid the bird breeding season, the Department recommends that beginning thirty days prior to the disturbance of suitable nesting habitat, the project proponent arranges for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within 300 feet of the construction work area (within 500 feet for raptors). The surveys should be conducted by a qualified biologist with experience in conducting breeding bird surveys. The surveys should continue on a weekly basis with the last survey being conducted no more than three days prior to the initiation of clearance/construction work. If a protected native bird is found, the project proponent should delay all clearance/construction disturbance activities in suitable nesting habitat within which the native bird is found, or within 300 feet of

5-16

nesting habitat (within 500 feet for raptor nesting habitat) until Sept. 15 or continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest (within 500 feet for raptor nests) shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. Limits of construction to avoid a nest should be established in the field with flagging and stakes or construction fencing. Construction personnel should be instructed on the sensitivity of the area. The project proponent should record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds.

5-16 cont.

In conclusion, the Department believes the MND and information presented in its attachments does not support a finding that any potentially significant impacts would be mitigated to less than significant levels or that no potentially significant impact would occur as a result of the project. The Department recommends the CPUC revise the MND to include an adequate discussion of biological resources potentially affected by the project, an analysis of potential impacts to these biological resources, and adequate mitigation measure to offset any identified impacts. The Department's anticipates its comments and recommendations presented above should help CPUC meet these objectives. Questions regarding this letter and further coordination on these issues should be directed to Ms. Wendy Campbell, Environmental Scientist, at (760) 872-1128.

Sincerely,

William Condon

Bruce Kinney
Environmental Program Manager

cc: Tonya Moore
Wendy Campbell
State Clearinghouse
Chron

Letter 5: California Department of Fish and Game

Response 5-1 The location of the Project within the range of the desert tortoise, Mohave ground squirrel, Swainson's hawk, willow flycatcher, and burrowing owl is stated in the Draft IS/MND. Draft IS/MND (p. 3.4-2) characterizes the Project area primarily by reference to "…important open spaces such as the Mohave ground squirrel conservation area, several desert wildlife management areas, and desert tortoise critical habitat." Draft IS/MND page 3.4-3 states, "Four species listed under the federal and/or State Endangered Species Acts have been detected in the study area for the AMSP/Lockhart Substation site…. Mojave Desert tortoise… Mohave ground squirrel… Swainson's hawk… and willow flycatcher…" (citations omitted). Page 3.4-3 also acknowledges that one burrowing owl was observed within the AMSP/Lockhart Substation site or within 1 mile of it during a survey in 2008.

See also, Draft IS/MND, pp. 3.4-4, 3.4-12 ("Desert tortoise, Mohave ground squirrel and western burrowing owl are presumed to occupy appropriate habitat located along the proposed fiber-optic routes") and 3.4-13 ("…two federal- and/or State-listed wildlife species occur in the Project area: desert tortoise and Mohave ground squirrel. Other listed species (Swainson's hawk and willow flycatcher) were observed in the Project area, but resident status has not been documented…. Desert tortoise, Mohave ground squirrel, and western burrowing owl are presumed present within the alignment of proposed telecommunications facilities."). The CEC and DOE analyses incorporated by reference into the Draft IS/MND are equally clear that the AMSP and Lockhart Substation Project are proposed within the range of the species identified in this comment.

Response 5-2 The comment correctly observes that the DOE EA incorporated by reference into the Draft IS/MND itself is a draft (see, e.g., Draft IS/MND, p. ES-4). CEQA Guidelines Section 15150 authorizes public agencies to incorporate by reference into a negative declaration "all or portions of another document which is a matter of public record or is generally available to the public." There is no requirement that the document incorporated be in final form, only that it be a matter of public record or generally available to the public. The DOE EA relied upon in the Draft IS/MND meets both of these criteria. As stated on Draft IS/MND page ES-4, the DOE EA is a public record accessible directly from the DOE Loan Program Office's Environmental Assessments page; it also is generally available to the public via that website, the CPUC's website for the Lockhart Substation Project, the two local libraries that served as repositories for the Draft IS/MND, and was circulated in its entirety with all copies of the Draft IS/MND.

The comment also correctly characterizes the CPUC's assumption (as stated on Draft IS/MND page B-6) that all of the agency-implemented measures (including those set forth in the DOE's Draft EA) would be implemented as part of the

Project. Subsequent or supplemental environmental review would be required under CEQA if substantial changes are proposed in the Project that would require major revisions to the MND, substantial changes occur in the circumstances under which the Project would be undertaken that would require major revisions to the MND, or new information of substantial importance to the Project becomes available that was not known (and could not have been known) when the MND was approved. In other words, if, in finalizing the EA, the DOE makes substantial changes in the mitigation measures relied upon by the CPUC in the Draft IS/MND, subsequent or supplemental CEQA environmental review could be required before the Project could proceed. If, however, the measures identified in Table B-2 (and thereby the Project analyzed by the CPUC in the Draft IS/MND) is not substantially changed) no additional review would be required.

Nonetheless, the DOE issued the Final Environmental Assessment for the Department of Energy Loan Guarantee to Mojave Solar, LLC for the Abengoa Mojave Solar Project near Barstow, California, and issued a Finding of No Significant Impact on July 8, 2011. No changes were made in the response to comments included in the Final EA with respect to the mitigation measures identified in Table B-2 of the Draft IS/MND or to the CEC conditions of certification summarized in the individual resource analyses in the Draft IS/MND. Therefore, no changes are required in the MND in that regard.

Response 5-3 California law defines "take" for purposes of the California Endangered Species Act as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (Fish & Game Code Section 86). Any Project-related activity that causes one of these triggering events to occur would require consultation with the California Department of Fish and Game (CDFG) to avoid potential impacts to rare, endangered, and threatened species and/or incidental take authorization. The CPUC agrees that incidental take authorization and consultation could be required to implement the Project. See Draft IS/MND Table 2-12-1, *Summary of Required Permits and Approvals*. See also, IS/MND page 3.4-11, which summarizes mitigation measures and other requirements to address impacts to desert tortoise and refers reviewers and decision makers to BIO-15 (Draft IS/MND, p. B-31), relating to "the full mitigation for habitat loss *and incidental take of desert tortoise*" (emphasis added).

Response 5-4 Potential impacts to desert tortoise are analyzed in Draft IS/MND Section 3.4, *Biological Resources*. The comment correctly observes that the Project would adversely affect 429 acres of habitat associated with the AMSP/Lockhart Substation site, and, due to the varying quality of the habitat, that 118 acres of compensation lands are proposed as mitigation. This impact and mitigation ratio were addressed by the CEC in its Application for Certification process for the AMSP, where the impact analysis and mitigation measures were approved by the CEC through coordination with CDFG and other resource agencies. The acreage

of impact to habitat associated with the SPS upgrades is 23.1 acres, as outlined in the DOE EA. Page 3.4-15 of the Draft IS/MND refers the reader to the DOE EA, which is incorporated by reference into the Draft IS/MND and contains text and a table describing the type of habitat being affected, the mitigation ratios applied based on habitat type, and total mitigation acreage required to address impacts to each type (DOE EA, p. 3.8-34). The CPUC independently evaluated these data, which translate the acres of impact into acres of mitigation, in light of habitat type and quality, the level of disturbance, and constituent elements of the habitat relative to the preferences of the special status species affected before reaching its conclusion in the Draft IS/MND.

It is important to note that the analysis distinguishes between instances in which site-specific protocol-level data are available and where such data are not available. Protocol surveys were conducted for desert tortoise at the AMSP site in 2007, 2008, and 2009. Accordingly, the analysis relies on the results of these surveys for activities that would occur at the AMSP site (such as construction and operation of the Lockhart Substation) and presumes presence of desert tortoise along telecommunication system routes, which were not included in the protocol-level surveys (Draft IS/MND, p. 3.4-14).

Relating to the direct impact to critical habitat, the Draft IS/MND incorporates by reference the DOE's analysis of the AMSP and all of the Project components, including the telecommunications system poles and access roads, crane pads, drainage improvements, and grading. Like the DOE, the CPUC determined that approximately 60 square feet (0.001 acre) of direct and permanent impacts would occur to designated critical habitat in the Fremont Kramer CHU related to construction of 30 new poles along the Kramer-to-Victor fiber-optic line (see Draft IS/MND, page 3.4-14).

Response 5-5 The Draft IS/MND analyzes potential impacts to Mohave ground squirrel in Section 3.4, *Biological Resources*. The comment correctly observes that the AMSP (including the Lockhart Substation site) would adversely affect 430 acres of low-quality habitat. This impact and mitigation ratio were addressed by the CEC in its Application for Certification process for the AMSP, where the impact analysis and mitigation measures were approved by the CEC through coordination with CDFG and other resource agencies. The acreage of impact to habitat associated with the SPS upgrades is 23.1 acres, as outlined in the DOE EA. Page 3.4-18 of the Draft IS/MND refers the reader to pages 3.8-36 and 3.8-41 of the DOE EA, which are incorporated by reference into the Draft IS/MND. The incorporated text and tables describe the type of habitat being affected, the mitigation ratios applied based on habitat type, and resulting total mitigation acreages for the AMSP site and along the telecommunication system routes. The Draft IS/MND identifies on page 3.4-17 that protocol surveys were conducted for Mohave ground squirrel in 2006 and 2007 at the AMSP site, with habitat

assessment activities conducted at the AMSP site in 2008. As explained in Response 5-4, it is important to distinguish (as the analysis in the Draft IS/MND does) between where protocol survey results were relied upon (i.e., at the AMSP site) and where species presence was presumed (i.e., along telecommunication system routes).

Response 5-6 Potential impacts to burrowing owl are analyzed in Draft IS/MND Section 3.4, *Biological Resources*. Actions to mitigate impacts to the species are summarized on page 3.4-12 as follows:

> *For burrowing owl, require pre-construction surveys and nest avoidance within the Lockhart Substation site and a 160-foot buffer as well as passive relocation and related monitoring; for each individual owl or pair identified on the site during pre-construction surveys, the preservation and management of compensatory habitat is required in accordance with specified ratios and stated goals (BIO-13). To address potential impacts to burrowing owl along the fiber-optic alignments, a California Burrowing Owl Consortium (CBOC), with CDFG approval, protocol-level burrowing owl survey will be conducted to detect the presence of burrowing owls; if burrowing owls are found, mapping, avoidance to the maximum extent possible, and, if avoidance is not possible, passive relocation would occur as specified (see BIO-23 and BIO-27). Relating to full mitigation for habitat loss and incidental take of burrowing owl, see BIO-15.*

The full text of the mitigation measures referenced is included in Draft IS/MND Appendix B (p. B-1 et seq.). As stated in Table B-2 in the context of BIO-13, *Burrowing Owl Impact Avoidance, Minimization and Mitigation Measures* (p. B-30), off-site mitigation would be provided for each individual owl or pair identified on the project site during pre-construction surveys. The determination of which ratio to apply would depend on whether the proposed compensatory habitat is occupied or unoccupied. Under 4(A) of BIO-13, replacement of occupied habitat with occupied habitat would occur at a ratio of 1.5 times 6.5 acres (9.75 acres) per pair or single bird and, under 4(B), replacement of occupied habitat with suitable unoccupied habitat would occur at a ratio of 3 times 6.5 acres (19.5 acres) per pair or single bird. Because the actions recommended in this comment would occur as part of the Project analyzed in the Draft IS/MND, no change has been made in response to this comment.

Response 5-7 As stated in the Draft IS/MND Appendix B Table B-2, *Agency-imposed Measures for the Abengoa Mojave Solar Project*, BIO-15(4) (p. B-31), "The project owner shall provide financial assurances to the [compliance project manager (CPM)], with copies of the document(s) to CDFG and USFWS, to guarantee that an adequate level of funding is available to implement all biological avoidance, minimization, and compensation measures described in the

conditions of certification." SCE is subject to this requirement, as well as CEC conditions of certification relating to burrowing owl. Because this financial guarantee would assure the availability of adequate funding for the long-term management of the acquired burrowing owl habitat, no separate requirement to establish a non-wasting endowment account is imposed.

Response 5-8 As stated in Table B-2 in the context of BIO-13, *Burrowing Owl Impact Avoidance, Minimization and Mitigation Measures* (pp. B-29, B-30), a Burrowing Owl Monitoring and Mitigation Plan (Burrowing Owl Plan) shall be developed in consultation with CDFG. This plan shall be consistent with CDFG guidance (CDFG 1995). The Burrowing Owl Plan would propose a location for compensatory mitigation land and the acreage required. If owls are identified during the pre-construction survey, an addendum to the Burrowing Owl Plan would be prepared that identifies the number of owls identified in the survey and the exact acreage to be preserved and managed in perpetuity for the species based on the results of the preconstruction survey and as agreed to in consultation with CDFG. The Burrowing Owl Plan would include monitoring and maintenance requirements for the compensatory habitat, details on methods for measuring compliance goals, and remedial actions to be taken if management goals are not met. Because the actions recommended in this comment would occur as part of the Project analyzed in the Draft IS/MND, no change has been made in response to this comment.

Response 5-9 As stated in Appendix B, Table B-2 in the context of BIO-13, *Burrowing Owl Impact Avoidance, Minimization and Mitigation Measures* (p. B-29), "if ground disturbance cannot be avoided in areas where nesting burrowing owls are active, a 250-foot exclusion area around occupied burrows will be flagged and this area will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival…." The Draft IS/MND indicated that SCE would not be responsible for implementing this portion of BIO-13. However, in response to this comment, SCE has agreed to abide by it. Accordingly, in response to subsection a) of this comment, measure BIO-13(1)(B) has been revised in Appendix B Table B-2 as follows:

> B. If ground disturbance cannot be avoided in areas where nesting burrowing owls are active, a 250-foot exclusion area around occupied burrows will be flagged and this area will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. The exclusion area shall remain connected to

natural area(s) to the extent possible, to avoid completely surrounding the owl with construction activities and/or equipment. **~~[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-13]~~**

As explained in the Draft IS/MND, the Designated Biologist assigned to the Project (who would be required to meet specified qualifications and be approved by CDFG [Table B-2, p. B-19]) would relocate burrowing owls, if necessary, using one-way trap doors (Table B-2, BIO-13(1)(A), p. B-29). Once the Designated Biologist has verified that all burrowing owls have vacated an occupied burrow, the Designated Biologist would collapse the burrow, preventing reoccupation for the duration of construction (Id.). As indicated in the Draft IS/MND, SCE is responsible for the implementation of this portion of BIO-13. The potential need for artificial burrows is contemplated in the Draft IS/MND (Table B-2 BIO-13(2)). Although the Draft IS/MND indicated that SCE would not be responsible for the installation of artificial burrows as part of its obligations under BIO-13, SCE has agreed to be subject to BIO-13(2) in response to this comment. Accordingly, in response to subsection b) of this comment, measure BIO-13(2) has been revised in Appendix B Table B-2 as follows:

2. *Artificial Burrow Installation*. Prior to any ground-disturbing activities, the project owner shall install five artificial burrows for each identified burrowing owl burrow in the project area that would be destroyed, within in the approved compensatory habitat area. The Designated Biologist shall survey the site selected for artificial burrow construction to verify that such construction will not affect desert tortoise or Mohave ground squirrel or existing burrowing owl colonies in the relocation area. Installation of the artificial burrows shall occur after baseline surveys of the relocation area and prior to ground disturbance or heavy equipment staging. Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG 1995) and shall be approved by the CPM in consultation with CDFG. **~~[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-13]~~**

As indicated in BIO-13 (Table B-2, pp. B-29, B-30) and noted above, the Burrowing Owl Plan developed in consultation with CDFG shall be consistent with CDFG guidance (CDFG 1995), shall identify the optimal time to relocate burrowing owl, and shall include monitoring and maintenance requirements for the compensatory habitat, details on methods for measuring compliance goals, and remedial actions to be taken if management goals are not met. Accordingly, as analyzed in the Draft IS/MND, CDFG already has the authority to grant advance approval of any owl relocation and could, consistent with BIO-13, require SCE to conduct monitoring as specified in the comment. Accordingly, the Draft IS/MND has not been revised in response to subsection c) of this comment.

Response 5-10 The recommendations made in this comment are addressed in Response 5-8 and Response 5-9. See also, IS/MND Table B-2, pp. B-29 and B-30 relating to BIO-13, *Burrowing Owl Impact Avoidance, Minimization and Mitigation Measures*.

Response 5-11 As stated in Draft IS/MND Appendix B, Table B-2 relating to BIO-7(o) (p. B-25) and BIO-30 (p. B-46), Abengoa Mojave Solar is responsible for implementing all of the actions requested in this comment on the Lockhart Substation site and all other areas within the AMSP boundary. Although the Draft IS/MND indicated that SCE would not be responsible for these activities, SCE has agreed to implement them in response to this comment. Accordingly, in response to this comment, measure BIO-7(o) and the comparable provision of BIO-30 have been revised in Appendix B Table B-2 as follows:

o. *Avoid Spread of Noxious Weeds*. The project owner shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds ~~**[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7]**~~:

- Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;
- Reestablish vegetation ~~**quickly**~~ on disturbed sites **and** temporarily disturbed areas, including pipelines, transmission lines, and staging areas **in an ecologically time-sensitive manner based on environmental conditions, with the understanding that any analysis of the potential introduction of invasive plants from work on a linear project would need to a) be done based on the practical limitations of linear, noncontiguous work, and b) account for adjacent environmental conditions (i.e., distinguish between existing invasive populations in the area and any potential introduction attributable to the linear project work)** (see BIO-9);
- Prevent spread of non-native plants via vehicular sources by implementing TrackcleanTM or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the construction site. The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s);
- Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations;
- Invasive non-native species shall not be used in landscaping plans and erosion control; and
- Monitor and rapidly implement control measures to ensure early detection and eradication of weed invasions.

Response 5-12 Detailed vegetation maps overlaid on aerial photographs that depict the locations of major vegetation communities in the vicinity of the Project components are provided in the draft DOE EA, which was incorporated into the Draft IS/MND by reference. See Figure 3.8-1, *Existing Vegetation – AMSP/Lockhart Substation Site* (DOE EA, p. 3.8-6); Figure 3.8-2, *Existing Vegetation – Lockhart to Tortilla* (DOE EA, p. 3.8-7); Figure 3.8-3, *Existing Vegetation – Lockhart to Kramer* (DOE EA, p. 3.8-8); Figure 3.8-4, *Existing Vegetation – Kramer to Victor* (DOE EA, p. 3.8-9). Descriptions of the vegetative cover types are provided in DOE EA Section 3.8.3.1 (p. 3.8-10 et seq.). Vegetation also is described in the CEC Commission Decision (p. 244) and SSA Part C Appendix A (p. A-21 et seq.). Consistent with CEQA Guidelines Section 15150, the incorporated material "shall be considered to be set forth in full" as part of the text of the Draft IS/MND. The comment does not question the adequacy or accuracy of the figures and descriptions provided in the Draft IS/MND.

Response 5-13 Draft IS/MND Section 3.4, *Biological Resources* (p. 3.4-25 et seq.), analyzes Project impacts to wetlands and determines that the Project would cause a less-than-significant impact to wetland resources under CEQA. As stated in the analysis (p. 3.4-26), "Direct impacts to wetlands include the conversion of up to 0.287 acre of wetlands to developed land, resulting from the construction of Lockhart Substation and distribution/transmission poles." The comment recommends no net loss of wetland habitat values or acreage, but does not question the proposed finding that the Project would not have a significant effect on the environment (CEQA Guidelines Section 15204).

Response 5-14 All waters of the U.S. were delineated to their jurisdictional limits as defined by Title 33 of the Code of Federal Regulations, Section 328.4 using the U.S. Army Corps of Engineers' *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (Aug. 2008) (see, DOE EA, p. 3.7-7). Following the survey and assessment of the entire AMSP area for jurisdictional waters of the U.S. and state (including wetlands), it was determined that only the portion of the study area buffer that overlaps a portion of Harper Dry Lake has the potential to include federally regulated waters. The Mojave Solar Project Jurisdictional Delineation Report, provided in the DOE EA, was evaluated as part of the analysis of Project impacts to wetlands and other jurisdictional waters in the Draft IS/MND. See DOE EA Figure E-3, *Potential Jurisdictional Waters of the U.S. and State.*

A formal field delineation for potential jurisdictional waters (federal and state) also was conducted for the proposed fiber-optic telecommunications routes using the latest federal and state guidance documents, methodologies, and mapping standards (DOE EA, p. 3.7-7). The extent and distribution of potential jurisdictional waters along these routes consisted of 20.44 acres, and, under State

jurisdiction only, 10.08 acres of unvegetated wash and 4.88 acres of vegetated swale (Draft IS/MND, p. 3.4-26). See, DOE EA Figures E-4 and E-5, each captioned *Proposed New SCE Lockhart Substation Portions of Route Requiring Interset Poles*; and Figure E-6, *Methods of Avoidance, Mojave Solar Project - SPS Alignment*. Within these areas, the Project would affect less than 0.01 acre (Draft IS/MND, p. 3.4-26).

The comment is clear that CDFG "considers impacts to wetlands (as defined by the Commission) potentially significant," but does not explain the basis for this comment in the context of the 0.01 acre of impact, and does not submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of any conclusion that an impact to 0.01 acre would be significant (see, CEQA Guidelines Section 15204(c)).

Response 5-15 CDFG's jurisdiction and authority pursuant to California Fish and Game Code Section 1600 et seq. is acknowledged in the Draft IS/MND (p. 3.4-9). See also, DOE EA Table 2-3, *Permits, Approvals, and Authorizations for the Project* (DOE EA, p. 2-32). The Draft IS/MND analyzes potential impacts to resources relevant to CDFG's streambed alteration agreement authority in Section 3.4, *Biological Resources*. The comment states that the Draft IS/MND "should fully identify the potential impacts to the lake, stream or riparian resources and provide adequate avoidance, mitigation, monitoring, and reporting commitments…" but does not question the adequacy or accuracy of the impacts analysis provided in the Draft IS/MND by identifying any significant impact that was not adequately addressed.

Response 5-16 The Draft IS/MND analyzes impacts to breeding birds in Section 3.4, *Biological Resources*. See, e.g., pages 3.4-18 and 3.4-19 (western burrowing owl), pages 3.4-20 and 3.4-21 (golden eagle), and page 3.4-22 (nesting birds). In each case, the Draft IS/MND concludes that implementation of the Applicant Proposed Measures, CEC Conditions of Certification, and DOE general and species-specific impact avoidance and minimization measures would ensure that the Project's impacts would be less than significant. See, for example, Draft IS/MND Appendix B, Table B-2, BIO-8 (p. B-25), which requires pre-construction nest surveys and impact avoidance and minimization measures for migratory birds, including pre-construction nest surveys if activities would occur from February 1 through August 1. See also, BIO-13(1)(A) (p. B-29), which requires pre-construction surveys for burrowing owl to be conducted before the beginning of the nesting season (February 1 through August 31), and BIO-13(3) (p. B-29), which requires birds to be relocated first to be color banded to allow monitoring of relocation success and prohibits such banding from occurring during the breeding season. The possibility of take and a corresponding requirement to obtain authorization under Fish and Game Code Section 2081 is acknowledged in the Draft IS/MND (see, IS/MND, p. 3.4-8; DOE EA, p. 2-32).

As stated in Draft IS/MND Section 3.4 (p. 3.4-22), "if construction is scheduled to occur during the nesting season, a nesting bird survey (in addition to the western burrowing owl survey) will be conducted within permanent and temporary impact areas. If nesting birds are detected in these areas, CDFG will be consulted to establish a no-disturbance buffer, until the nest is no longer active as determined by a qualified biologist as determined through nest monitoring."

Construction personnel would be instructed on the environmental sensitivity of the area. See Draft IS/MND Appendix B, Table B-1, *Applicant Proposed Measures for the Lockhart Substation Project*, BIO-2 (p. B-7), in which SCE commits itself to preparing a Worker Environmental Awareness Program (WEAP) and requiring all construction crews and contractors to participate in WEAP training prior to starting work on the Project, and Table B-2 BIO-5 (p. B-21), which provides the details of the agency-imposed Worker Environmental Awareness Program that is applicable to SCE as well as Mojave Solar. Documentation of compliance with state and federal laws is among the duties required of the Designated Biologist (see, Table B-2, p. B-20, BIO-2).

Because substantially all of CDFG's recommendations would occur pursuant to Project implementation, no additional or different mitigation measures are imposed in response to this comment.

SOUTHERN CALIFORNIA EDISON
An *EDISON INTERNATIONAL* Company

June 14, 2011

VIA EMAIL

Mr. Iain Fisher
Energy Division
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102

SUBJECT: Southern California Edison's Lockhart Substation Project (CPUC A.11-05-006)
Draft Initial Study / Mitigated Negative Declaration

Dear Mr. Fisher:

Enclosed please find Southern California Edison's (SCE) comments on the Draft Initial Study / Mitigated Negative Declaration (Draft IS/MND) for the Lockhart Substation Project. SCE's comments are provided in table format that lists the section number, page number, text reference and suggested revisions.

SCE appreciates your time and attention in addressing its comments on the Draft IS/MND. If there are any questions, please don't hesitate to give me a call at (626) 302-3613.

Sincerely,

Ryan Stevenson
Regulatory Affairs

Enclosure

Southern California Edison Company
Comments on the Draft IS/MND for Lockhart Substation Project
June 14, 2011

No.	Section	Page	Draft MND Text Reference	Comments	
1.	ES.6	ES-6	• Generation Tie Line Connections: .....Mojave Solar-owned tower~~(s)~~.	There will be one double-circuit tower.	6-1
2.	ES.6	ES-6	• Transmission Lines: Loop the...3,000 feet of new transmission line segments (~~parallel lines,~~ each approximately 1,500 feet)	The loop-in lines are not parallel.	6-2
3.	ES.8, Table ES-1; 3.4.4; Appendix B, Table B-3	ES-8,9; 3.4-24,25; B-63,64	Mitigation Measure CPUC-BIO-1:	It seems that the requirements within this mitigation measure are stated differently in the Executive Summary and in the MMRCP than what's included in the Biological Resources Section. Please confirm the appropriate mitigation measure requirements.	6-3
4.	ES.8, Table ES-1	ES-8	Mitigation Measure CPUC-BIO-1: Floristic surveys shall be conducted along ~~downstream~~ SPS upgrades in accordance with CDFG Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG, 2009).	The introduction for this mitigation measure is the same throughout the document. Please change "downstream" to "SPS" for clarification purposes.	6-4
5.	3.4.4	3.4-24	Mitigation Measure CPUC-BIO-1: b. The Designated Biologist shall establish Environmentally Sensitive Areas around rare plant occurrences at a minimum of 20 feet from the uphill side of a rare plant occurrence and 10 feet from the downhill side where practicable. Equipment and vehicle maintenance areas, and wash areas, shall be located 100 feet from any occurrences.	Add "where practicable" at the end of the first sentence within part b of this mitigation measure as stated in the Biological Resources Section (3.4.4).	6-5
6.	2.7.1.2	2-14	....the installation of a temporary chain-link fence surrounding the substation construction site.	SCE responsibility clarified.	6-6

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Southern California Edison Company
Comments on the Draft IS/MND for Lockhart Substation Project
June 14, 2011

7.	3.9.4.c	3.9-7	The existing transmission line spans the Mojave River and there would be no construction activities ~~or~~ that would cause additional impacts within the floodplain associated with the telecommunication system.	There will be construction in the Mojave River. A pole will be walked to and climbed that is in the river.	6-7
8.	2.4.1	2-6	~~There would be one back-up generator.~~	There will not be a backup generator so this reference can be removed.	6-8
9.	2.7.1.3	2-16,17	EQUIPMENT AND WORKFORCE ESTIMATES FOR LOCKHART AND TORTILLA SUBSTATIONS CONSTRUCTION	Refine Table 2.7-4 title for accuracy	6-9
10.	3.5.1	3.5-1	The cultural and paleontological resources setting is described in Section ….	The paragraph identifies cultural and paleontological discussions in other environmental documents.	6-10
11.	3.5.1	3.5-2	A Phase I archaeological study was ~~and built environment survey were~~ conducted for the Project in 2006 and updated in 2009 and 2010. The built environment survey was conducted in 2009 and 2010.	Per the DOE EA and the draft cultural resources report by AECOM (Wilson 2010 et al), the original records search was done in 2006 with an update in 2009 and 2010 for the telecom upgrades. The archaeological surveys were in 2009 and 2010 as were the built environment surveys.	6-11
12.	3.5.1	3.5-2	~~Two~~ Three responses were received: one from the Kern Valley Indian Council, one from the San Manuel Band of Mission Indians and one ~~the other~~ from a representative affiliated with the Tebatulabal, Kawaiisu, Koso, and Yokut tribes. However, the results of these efforts did not identify any sacred resources or areas of concern (CEC SA, p.5.3-15; CEC Commission Decision, p. 405, and DOE EA 3.9-5).	Per the DOE EA, a second round of consultation letters was sent out to tribal members in Sept 2010. San Manuel responded and consulted with BLM at that time.	6-12
13.	3.5.1	3.5-2	As a result of archival research and pedestrian surveys, ~~88~~ 87 cultural resources were recorded within the Project area.	Per the AECOM cultural resources report, Table 10 (Wilson et al 2010), the numbers are slightly different. Please verify.	6-13
14.	3.5.1	3.5-2	An additional ~~125~~ 127 isolated artifacts were recorded during survey…	Per the AECOM cultural resources report, table 10 (Wilson et al 2010), the numbers are slightly	6-14

				different. Please verify.	
15.	3.5.1	3.5-3	This study included a records search at the San Bernardino County Museum~~,~~ and a review of literature and geologic maps~~, and a pedestrian paleontological survey~~ of the Project area.	Although the DOE EA states on page 3.6-1 that "The assessments were based on a comprehensive literature review, museum records search, and fieldwork for the AMSP/Lockhart Substation and telecommunication system.", the paleontological report cited actually states that "the scope of services for the current study included a comprehensive museum records search and literature review and preparation of this technical report of findings that includes recommended mitigation measures" (SWCA 2010:i).	6-15
16.	3.5.1	3.5-3	Eighteen previously recorded vertebrate fossil localities were identified within the ~~Lockhart Substation site~~ Project area.	Although the DOE EA states on page 3.6-5, "A review of the Regional Paleontologic Locality Inventory maintained by the San Bernardino County Museum revealed that 18 vertebrate localities have been previously recorded and collected during a prior mitigation project within the AMSP/Lockhart Substation area." This is incorrect. According to the paleontological study in Appendix L of the DOE EA, "A review of the Regional Paleontologic Locality Inventory maintained by the San Bernardino County Museum revealed that 18 vertebrate localities have been previously recorded and collected during a prior mitigation project within the project area". Figures 6 & 7 of the same report show that the localities are along the Kramer-Victor telecom line. Additionally in the CEC's Commission Decision page 424 states, "There are no known paleontological resources on the project site."	6-16

2-45

				i.e. the Lockhart Substation.	
17.	3.5.4	3.5-7	~~Two paleontologically sensitive geologic formations (older Quaternary Alluvium and younger Quaternary Alluvium at depth) underlie portions of the Lockhart Substation project area. Eighteen possible vertebrate fossil localities have been identified within the AMSP site, in the vicinity of the Lockhart Substation site, at depths of 3-14 feet below ground surface.~~	The Paleontological study (SWCA 2010) does not identify these soils as being under the substation, gentie and distribution. See Figures 2-4. This sentence should be removed and the paragraphs that also state this should be edited in light of this.	6-17
18.	3.5.4	3.5-9	~~Two~~ One paleontologically sensitive geologic formations (~~older Quaternary Alluvium and~~ younger Quaternary Alluvium at depth) underlies portions of the ~~Project area~~ transmission line. No fossils were found within the transmission line and related structures project areas. ~~Eighteen possible vertebrate fossil localities have been identified within the AMSP site at depths of 3-14 feet below ground surface (DOE EA, p.3.6-5).~~ Paleontological resources could be impacted as a result of excavation related to the construction of the transmission lines and related structures (at depth).	The Paleontological study (SWCA 2010) only identifies one sensitive paleontological formation as being under the transmission line and related structures. See Figure 2 of the SWCA 2010 report.	6-18
19.	3.5.4	3.5-11	~~Two~~ One paleontologically sensitive geologic formations (~~older Quaternary Alluvium and~~ younger Quaternary Alluvium at depth) underlies portions of the Lockhart-to-Kramer fiber-optic corridor (DOE EA, p. 3.6-6).	The Paleontological study (SWCA 2010) only identifies one sensitive paleontological formation as being under the Lockhart-Kramer fiber optic corridor See Figures 2-4 of the SCA 2010 report.	6-19
20.	3.5.4	3.5-13	~~Two paleontologically sensitive geologic formations (older Quaternary Alluvium and younger Quaternary Alluvium at depth) underlie portions of the AMSP boundary. Eighteen possible vertebrate fossil localities have been identified within the AMSP site at depths of 3-14 feet below ground surface (CEC Commission Decision, p. 3.6-5).~~	The Paleontological study (SWCA 2010) does not identify these soils as being under the telecommunications route from Lockhart to the Alpha and Beta Switchyards. See Figure 2-4 of the SWCA 2010 report. This sentence should be removed and the paragraphs that also state this should be edited in light of this.	6-20

Letter 6: Southern California Edison

Response 6-1 The following clarification has been made to the second bullet point on page ES-6 of the Draft IS/MND in response to this comment:

> **Generation Tie Line Connections:** Connect the two Mojave Solar-built gen-ties into SCE's proposed Lockhart Substation. This work would involve construction of two single spans of conductors between the Lockhart switchrack and the last Mojave Solar-owned tower~~(s)~~.

Response 6-2 The following clarification has been made to the fourth bullet point on page ES-6 of the Draft IS/MND in response to this comment:

> **Transmission Lines:** Loop the existing Coolwater-Kramer No. 1 220 kV transmission line into the proposed substation. The transmission loop would require construction of approximately 3,000 feet of new transmission line segments (~~**parallel lines,**~~ each approximately 1,500 feet) creating the new Lockhart-Kramer and Coolwater-Lockhart 220 kV transmission lines.

Response 6-3 Comments 6-3, 6-4, and 6-5 each relate to Mitigation Measure CPUC-BIO-1. Individual responses are provided and, to avoid confusion, a consolidated redline/strike-out showing changes made to this measure relative to the Draft IS/MND is provided in Response 6-5.

The requirements of Mitigation Measure CPUC-BIO-1 were correctly stated on Draft IS/MND page 3.4-24 et seq. As shown in Response 6-5, the Executive Summary (Draft IS/MND, pp. ES-8 and ES-9) and the MMRCP (Draft IS/MND Appendix B, pp. B-63 and B-64) have been revised in response to this comment to clarify this.

Response 6-4 In response to this comment, the word "downstream" has been replaced by the acronym "SPS" each time Mitigation Measure CPUC-BIO-1 appears in the Final MND (the revision is shown in Response 6-5). The acronym "SPS" stands for *Special Protection System*, which is a term used in the DOE EA to distinguish the Project facilities from other AMSP project components (see, e.g., DOE EA, p. xv). The CEC used the term "downstream" to describe these components (see, e.g., CEC SSA Part C Appendix A, p. A-4). For consistency and clarity, the acronym SPS is used in Mitigation Measure CPUC-BIO-1 in the Final MND.

Response 6-5 Although Section 3.4.4 does not state "where practicable" in the context of rare plant occurrences, subsection b) of Mitigation Measure CPUC-BIO-1 has been revised to clarify the CPUC's intention that the distance- and direction-related components of the requirements of this measure be implemented to the extent they are capable of being implemented. Accordingly, subsection b) of Mitigation

Measure CPUC-BIO-1 has been revised as suggested in this comment each time the measure appears in the document, i.e., in the Executive Summary (Draft IS/MND, p. ES-8), Section 3.34 (p. 3.4-24), and the MMRCP (Draft IS/MND Appendix B, p. B-63).

Mitigation Measure CPUC-BIO-1: Floristic surveys shall be conducted along ~~**downstream**~~ **SPS** upgrades in accordance with CDFG Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG, 2009). Rare plants encountered shall be subject to the following:

a. Incorporate site design modifications to minimize impacts to special-status plants by limiting the width of linear work areas and adjusting the location of staging areas, lay downs, spur roads and poles or towers as appropriate to avoid or minimize impacts to rare plant populations.

b. The Designated Biologist shall establish Environmentally Sensitive Areas around rare plant occurrences at a minimum of 20 feet from the uphill side of a rare plant occurrence and 10 feet from the downhill side where practicable. Equipment and vehicle maintenance areas, and wash areas, shall be located 100 feet from any occurrences.

c.~~**b.**~~ Plant species shall be included in the Worker Environmental Awareness Program.

d.~~**c.**~~ If California Rare Plant Rank 1 plants are detected in the Project disturbance area, the Project owner shall prepare and implement a Special-Status Plant Mitigation Plan, with a goal of retaining at least 75 percent of the local population of the affected species. Compensatory mitigation at a ratio of 3:1 shall be required for the portion that is not avoided. At a minimum, the Plan shall include a description and discussion of the species, a description of avoidance and minimization measures, and a compensation plan if total avoidance is not possible.

e.~~**d.**~~ If California Rare Plant Rank 2 plants are detected in the Project disturbance area, the Project owner shall prepare and implement a Special-Status Plant Mitigation Plan, with a goal of retaining at least 75 percent of the local population of the affected species. Compensatory mitigation at a ratio of 2:1 shall be required for the portion that is not avoided. At a minimum, the Plan shall include a description and discussion of the species, a description of avoidance and minimization measures, and a compensation plan if total avoidance is not possible.

f.~~**e.**~~ Where compensatory mitigation is required, it shall consist of acquisition of habitat supporting the target species, or restoration/ enhancement of existing populations. 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. 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.

g. ~~f.~~ If California Rare Plant Rank 3 plants are detected in the Project disturbance area, and the occurrence has local or regional significance, the occurrence shall be treated as a Rank 2 plant species, as above. A plant occurrence would be considered to have local or regional significance if: (1) it occurs at the outermost periphery of its range in California; (2) it occurs in an atypical habitat, region, or elevation for the taxon that suggests the occurrence may have genetic significance; or (3) it exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or subspecies.

h. ~~g.~~ For all rare plant impacts, seeds shall be collected from the affected plants onsite, prior to construction, to conserve germplasm and provide a seed source for restoration efforts. Seed shall be collected under the supervision or guidance of a reputable seed storage facility, and costs associated with long-term storage shall be the responsibility of the Project owner.

Response 6-6 In response to this comment, the following clarification of SCE's responsibility has been made in the last sentence of the first paragraph in Section 2.7.1.2, Grading and Ground Disturbance (Draft IS/MND, p. 2-14):

> Upon completion of Project site preparation by Abengoa, SCE would assume responsibility for the remainder of the Lockhart Substation construction including the installation of a temporary chain-link fence surrounding the **substation** construction site.

Response 6-7 Whether the Project would substantially alter the existing drainage pattern in a manner that would result in substantial erosion or siltation on- or off-site is analyzed on pages 3.9-7 and following of the Draft IS/MND, which concludes that the Project would cause a less-than-significant impact in this respect. Lines 12-14 of the discussion of CEQA Guidelines Criteria IX(c) on Draft IS/MND p. 3.9-7 state, "The existing transmission line spans the Mojave River and there would be no construction activities or additional impacts within the floodplain associated with the telecommunication system." The comment clarifies that, while the existing transmission line does span the Mojave River, attaching the fiber-optic cable to it would require a worker to walk to the pole located in the river and climb it. The quoted language in the Draft IS/MND has been corrected as shown below in response to this comment. However, the action described (walking to and climbing the existing pole) does not change the

conclusion that the Project would result in a less-than-significant impact related to substantially altering an existing drainage pattern that would result in substantial erosion or siltation, because a worker accessing the pole by foot represents a negligible, temporary, and highly-localized disturbance to a minimal area that would not result in changes to local drainage patterns or cause erosion or siltation.

> The existing transmission line spans the Mojave River**. ~~and there would be no c~~ C**onstruction activities **~~or additional impacts~~** within the floodplain associated with the **proposed** telecommunication system **work would include walking to and climbing an existing pole located in the river to attach the fiber-optic cable. This activity would not substantially alter an existing drainage pattern that would result in substantial erosion or siltation because it would cause a negligible, temporary, and highly-localized disturbance to a minimal area. It would not result in changes to local drainage patterns or cause erosion or siltation.**

Response 6-8 In response to this comment, Draft IS/MND Section 2.4.1, *Lockhart Substation*, paragraph 2, line 6 (p. 2-6) has been revised as shown below. This clarification does not cause a new significant impact or cause an impact identified in the Draft IS/MND as a less-than-significant effect to become significant, and so does not affect any of the significance conclusions made in the Draft IS/MND.

> ….(MEER), and light and power. **~~There would be one back-up generator.~~** Figures 1 and 2 in….

Response 6-9 In response to this comment, two revisions have been made to Draft IS/MND Section 2.7.1.3, *Construction Equipment and Workforce Estimates* (p. 2-16) to clarify that the work described therein relates to the construction of the proposed Lockhart Substation and to the upgrade of the existing Tortilla Substation. Paragraph 1 has been revised as follows:

> Table 2.7-4, *Equipment and Workforce Estimates for **~~Lockhart~~** Substation Construction **Activities***, provides information about the number of people, types of equipment and duration of work required to construct the Lockhart Substation **and upgrade the existing Tortilla Substation**.

The caption of Table 2.7-4 on Draft IS/MND page 2-16 and in the Table of Contents has been revised accordingly:

> TABLE 2.7-4, EQUIPMENT AND WORKFORCE ESTIMATES FOR **~~LOCKHART~~** SUBSTATION CONSTRUCTION **ACTIVITIES**

Response 6-10 Paleontological resources are one of several types of resources addressed under the larger umbrella characterized as "cultural resources" in CEQA Guidelines Appendix G Section V, *Cultural Resources*. Other types of resources addressed under this broader category include historical resources, unique archaeological resources, and human remains. Because identifying one of the specific types of resources addressed in Draft IS/MND Section 3.5 in the introductory paragraph without identifying the others could cause confusion, the requested change has not been made.

Response 6-11 Paragraph 2 under "Methodology" on Draft IS/MND page 3.5-2 has been revised in response to this comment to clarify the timing of certain cultural resources-related studies conducted for the Project as follows:

> A Phase I archaeological study **was** ~~**and built environment survey were**~~ conducted for the Project in **2006 and updated in** 2009 **and 2010**. **The built environment study was conducted in 2009 and 2010**.

Response 6-12 Paragraph 3 under "Methodology" on Draft IS/MND page 3.5-2 has been revised in response to this comment as follows:

> A Sacred Lands File search from the NAHC and contact with local Native American groups and interested parties also were conducted. ~~**Two**~~ **Three** responses were received: one from the Kern Valley Indian Council, **one from the San Manuel Band of Mission Indians, and one** ~~**the other**~~ from a representative affiliated with the Tebatulabal, Kawaiisu, Koso, and Yokut tribes. However, the results of these efforts did not identify any sacred resources or areas of concern (CEC SA, p.5.3-15; CEC Commission Decision, p. 405**; DOE EA, p. 3.9-5**).

Response 6-13 The information presented in Paragraph 4, sentence 1, under "Methodology" on Draft IS/MND page 3.5-2 has been verified in response to this comment, and the sentence revised as follows:

> As a result of archival research and pedestrian surveys, **87** ~~**88**~~ cultural resources were recorded within the Project area.

Response 6-14: The information presented in Paragraph 4, sentence 3, under "Methodology" on Draft IS/MND page 3.5-2 has been verified in response to this comment, and the sentence revised as shown below. However, this change in the number of artifacts does not affect the conclusions reached in the Draft IS/MND because, as stated in the Draft IS/MND (p. 3.5-2), "isolated artifacts are not considered eligible for listing in the California Register or the National Register and are not considered historical resources under CEQA."

> An additional **127** ~~**125**~~ isolated artifacts were recorded during survey….

Response 6-15 The 2009 paleontological resources report indicates that a "pedestrian reconnaissance survey of the entire MSP site and 200 foot buffer was performed" (p.7). The description of the source materials relied upon in drafting the paleontological study relied upon in the DOE EA and Draft IS/MND (see Draft IS/MND, p. 3.5-3, paragraph 3, sentence 2) has been revised in response to this comment:

> This study included a records search at the San Bernardino County Museum**,** a review of literature and geologic maps, and a pedestrian paleontological survey **of the Lockhart Substation portion of** the Project area.

Response 6-16 The area in which the 18 previously-recorded vertebrate fossils were found (as described in the Draft IS/MND, p. 3.5-3, paragraph 3, last sentence) has been clarified in response to this comment to correct an editorial oversight and for consistency with the CEC Commission Decision and DOE EA Appendix L, each of which was incorporated by reference in the draft IS/MND. The correction does not affect the significance conclusions reached because potential impacts were analyzed in the Draft IS/MND based on the locations of resources as identified in the CEC and DOE analyses and the underlying reports rather than as described in the Draft IS/MND's summary of the locations.

> Eighteen previously recorded vertebrate fossil localities were identified within the **Project area.** ~~**Lockhart Substation site.**~~

A similar clarification has been made on p. 3.5-7, paragraph 6, second sentence:

> Eighteen possible vertebrate fossil localities have been identified within the ~~**AMSP site, in the vicinity of the Lockhart Substation site,**~~ **Project area** at depths of 3-14 feet below ground surface.

And on p. 3.5-9, third paragraph, second sentence; and p.3.5-13, paragraph 5, second sentence:

> Eighteen possible vertebrate fossil localities have been identified within the ~~**AMSP site**~~ **Project area** at depths of 3-14 feet below ground surface (DOE EA, p.3.6-5).

Response 6-17 The 2010 SWCA paleontology report does not address the paleontological sensitivity of the AMSP/Lockhart site. The DOE EA (April 2011), the CEC AFC Staff Assessment (March 2010), and the 2009 SWCA paleontology report, which evaluates the paleontological sensitivity of the AMSP project area, identify both older and younger Quaternary Alluvium underlying the AMSP/Lockhart site. The older Alluvium underlies the younger alluvium. Therefore, based on the DOE EA and CEC AFC Staff assessment, it is assumed that older Quaternary Alluvium is

present at depth beneath the substation, gen-tie, and distribution components. Therefore, the requested change has not been made.

Response 6-18 See response 6-17.

Response 6-19 The 2010 SWCA paleontology report assesses the sensitivity of only certain sections of the Lockhart-Kramer telecommunications corridor. The DOE EA assesses the sensitivity of the entire telecommunications corridor. Therefore, the text as stated is correct and the requested change has not been made.

Response 6-20 See response 6-17.

2.3 Other Revisions to the Draft IS/MND

In reviewing the Draft IS/MND, CPUC staff identified other minor revisions that clarify statements or correct grammatical or editorial errors and/or minor inaccuracies or omissions. The following changes have been made to the Draft IS/MND for one or more of these purposes.

1. The sentence beginning on Draft IS/MND, page 3.4-4, paragraph 2, line 3 has been revised as follows:

   > The proposed fiber-optic telecommunication system corridors cross U.S. Fish and Wildlife ~~**Survey**~~ **Service** (USFWS) designated critical habitat for desert tortoise in the Fremont-Kramer critical habitat unit (CHU).

2. The last line of paragraph 2 on Draft IS/MND page 3.4-15 refers the reader to page 3.8-25. This cross-reference to the DOE EA has been corrected as follows:

   > … (see, DOE EA, p. 3.8-**34** ~~**25**~~ and DOE EA, p. 3.8-40).

APPENDIX A

Lockhart Substation Project (A.11-15-006) Draft Initial Study/Mitigated Negative Declaration

(Provided on CD)

APPENDIX B
Mitigation Monitoring, Reporting and Compliance Program

B.1 Introduction

This document describes the mitigation monitoring, reporting and compliance program (Final MMRCP) for ensuring the effective implementation of the mitigation measures required for the California Public Utilities Commission (CPUC, or Commission) approval of the Southern California Edison (SCE) application to construct, operate and maintain the Project.

Applicant Proposed Measures (APMs) identified by SCE to reduce or avoid potential environmental impacts of the Project are provided in Table B-1, *Applicant Proposed Measures for the Lockhart Substation Project*. Design features, environmental protection measures, and best management practices (BMPs) imposed by other agencies with relevant discretionary authority are provided in Table B-2, *Agency-Imposed Measures for the Abengoa Mojave Solar Project.* Mitigation measures imposed by the CPUC over and above those imposed by other agencies are presented in Table B-3, *Mitigation Monitoring, Reporting and Compliance Program for the Lockhart Substation Project*. As stated in the Draft IS/MND, the CPUC's impact analysis assumed that these APMs and other agencies' requirements would be implemented as part of the Project. Consequently, the APMs and requirements identified are not "mitigation measures" as the term is defined under CEQA, and are not included in Table B-3. All revisions to these Tables B-1, B-2, and B-3 relative to the draft MMRCP provided in Appendix B of the Draft IS/MND are shown in redline/strikeout: Additions to the draft text are indicated by **bold underline**; deletions are indicated by ~~**bold strikeout**~~.

For information about the following MMRCP topics, see Draft IS/MND Appendix B: MMRCP Authority (Section B.1.1), Roles and Responsibilities (Section B.1.2), Enforcement and Responsibility (Section B.1.3), Mitigation Compliance Responsibility (Section B.1.4), Dispute Resolution Process (Section B.1.5), and General Monitoring Procedures (Section B.1.6). No changes have been made to these sections.

B.2 Elements of the Mitigation Monitoring, Reporting and Compliance Program

Tables B-1, B-2, and B-3 are set forth below. Revisions are shown in redline-strikeout.

TABLE B-1
APPLICANT PROPOSED MEASURES FOR THE LOCKHART SUBSTATION PROJECT

APM No.	APM Description
Air Resources	
AIR-1	Construction activities would be conducted in compliance with AQMD requirements, as applicable to the Project
Aesthetics and Visual Resources	
AES-1	LSTs and TSPs would be galvanized steel with a dulled grey finish that minimizes reflected light.
AES-2	Insulators that minimize reflection of light would be utilized.
AES-3	Substation equipment would have materials that minimize reflective light.
AES-4	If chain link fence is used, it would have a dulled-finish.
AES-5	The substation lighting would be designed to be manually operated for non-routine nighttime work.
Biological Resources	
BIO-1	Preconstruction biological clearance surveys would be conducted to identify special-status plants and wildlife.
BIO-2	SCE would prepare a Worker Environmental Awareness Program (WEAP). All construction crews and contractors would be required to participate in WEAP training prior to starting work on the project.
BIO-3	All transmission and subtransmission towers and poles would be designed to be avian-safe in accordance with the suggested practices for Avian Protection on Power Lines: the State of the Art in 2006 (Avian Power Line Interaction Committee 2006).
Cultural Resources	
CR-1	A cultural resource inventory of the project area would be conducted for cultural resources prior to any disturbance. All surveys would be conducted and documented as per applicable laws, regulations, and guidelines.
CR-2	To the extent feasible, all ground-disturbing activities shall be sited to avoid or minimize impacts to cultural resources listed as, or potentially-eligible for listing as, unique archaeological sites, historical resources, or historic properties.
CR-3	A protective buffer zone would be established and maintained around each recorded archaeological site within or immediately adjacent to the ROW.
Paleontological Resources	
PALEO-1	A paleontologist would conduct a pre-construction field survey of the project area.
PALEO-2	Prior to construction, a certified paleontologist would supervise monitoring of construction excavations.
Geology and Soils	
GEO-1	Prior to final design of substation facilities, and transmission and, a combined geotechnical engineering and engineering geology study would be conducted to identify site-specific geologic conditions and potential geologic hazards in sufficient detail to support sound engineering practices.
GEO-2	For new substation construction, specific requirements for seismic design would be followed based on the Institute of Electrical and Electronic Engineers' 693 "Recommended Practices for Seismic Design of Substations".
GEO-3	New access roads, where required, would be designed to minimize ground disturbance during grading.
GEO-4	Cut and fill slopes would be minimized by a combination of benching and following natural topography where feasible.
GEO-5	Any disturbed areas associated with temporary construction would be returned to preconstruction conditions (to the extent feasible) after the completion of project construction.

TABLE B-1
APPLICANT PROPOSED MEASURES FOR THE LOCKHART SUBSTATION PROJECT

APM No.	APM Description
Hazards And Hazardous Materials	
HAZ-1	A Phase I ESA would be performed at each new or expanded substation location and along newly acquired transmission subtransmission line ROWs.
HAZ-2	SCE would implement standard fire prevention and response practices for the construction activities.
HAZ-3	As applicable, SCE would follow fire codes per Cal Fire Power Line Fire Prevention Fire Guide requirements for vegetation clearance during construction of the project to reduce the fire hazard potential.
HAZ-4	Hazardous materials and waste handling would be managed in accordance with the following SCE plans and programs: • Spill Prevention, Countermeasure, and Control Plan (SPCC Plan). In accordance with Title 40 of the CFR, Part 112, SCE would prepare a SPCC for proposed and/or expanded substations, as applicable. • Hazardous Materials Business Plans (HMBPs). Prior to operation of new or expanded substations, SCE would prepare or update and submit, in accordance with Chapter 6.95 of the CHSD, and Title 22 CCR, an HMBP, as applicable. • Storm Water Pollution Prevention Plan (SWPPP): A project-specific construction SWPPP would be prepared and implemented prior to the start of construction of the transmission line and substation. • Health and Safety Program: SCE would prepare and implement a health and safety program to address site-specific health and safety issues. • Hazardous Materials and Hazardous Waste Handling: A Project-specific hazardous materials management and hazardous waste management program would be developed prior to initiation of the project. Material Safety Data Sheets would be made available to all Project workers • Emergency Release Response Procedures: An Emergency Response Plan detailing responses to releases of hazardous materials would be developed prior to construction activities. All construction personnel, including environmental monitors, would be aware of state and federal emergency response reporting guidelines.
HAZ-5	Hazardous materials would be used or stored and disposed of in accordance with Federal, State, and Local regulations.
HAZ-6	The substation would be grounded to limit electric shock and surges that could ignite fires.
HAZ-7	All construction and demolition waste would be removed and transported to an appropriately permitted disposal facility.
Hydrology and Water Quality	
HYDRO-1	Construction equipment would be kept out of flowing stream channels as feasible.
HYDRO-2	Towers would be located to avoid active drainage channels, especially downstream of steep hill slope areas, to minimize the potential for damage.
Land Use	
LU-1	SCE shall provide 14 days of advance notice of the start of construction to property owners located within 300 feet of construction-related activities.
Noise	
NOISE-1	SCE would comply with local noise ordinances.
Transportation and Traffic	
TRANS-1	Traffic control services would be used for equipment delivery, supply delivery, and conductor stringing, as applicable.
TRANS-2	Construction traffic would be scheduled for off-peak hours to the extent feasible and would not block emergency equipment routes.
TRANS-3	If work requires modifications or activities within local roadway and railroad ROWs, appropriate permits would be obtained prior to the commencement of construction activities.

TABLE B-2
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Visual Resources		
1. Design Feature 1: The surfaces of all aboveground structures except the solar collectors (i.e., control building, administration building, warehouse, water treatment building, solar collector array assembly buildings, enclosures for mechanical and electrical equipment, substation MERS building, water storage tanks, etc.) will be given low reflectivity finishes with neutral desert tan colors sympathetic to the desert environment to minimize the contrast of the structures with their backdrops.	X	
2. Design Feature 2: All substation equipment will be specified with low reflectivity, neutral finishes. All insulators at the substations and on the takeoff equipment will be nonreflective and nonrefractive. The chain-link fences surrounding the substations and the Project site will have a dulled finish to reduce contrast with the desert surroundings.		
3. Design Feature 3: For overhead transmission lines, tubular steel poles (TSPs) will be painted lightgray colors or will be dulled galvanized steel. If concrete monopoles are used, they will be natural concrete with light-gray colors. All insulators specified for this Project will be made of materials that do not reflect or refract light. All conductors specified for the AMSP/Lockhart Substation site will be nonspecular; that is, they will be treated at the factory to dull their surfaces to reduce their potential to reflect light.	X X	X
4. Design Feature 4: All construction-related operations at the construction laydown area will be kept clean and tidy. Mojave Solar will remove construction debris promptly at regular intervals, not to exceed 2 weeks at any one location.	X	
5. Design Feature 5: All outdoor lighting will be the minimum required to meet safety and security standards and all light fixtures will be hooded to eliminate any potential for glare effects and to prevent light from spilling off the site or up into the sky. In addition, the light fixtures will have sensors and switches to permit the lighting to be turned off at times when it is not required.	X	
6. Design Feature 6: The Applicant will voluntarily consult with residential property owners within 0.5 mile of the proposed AMSP/Lockhart site boundary to suggest offsite-planting on adjacent residential properties (if landowner is interested) to assist with visual screening of the AMSP/Lockhart site as seen from these single-family residential locations.	X	
Air Quality		
Design Measures		
1. The Applicant will have an onsite construction mitigation manager who will be responsible for the implementation and compliance of the construction mitigation program. The documentation of the ongoing implementation and compliance with the proposed construction mitigations will be provided on a periodic basis.	X	
2. All unpaved roads and disturbed areas in the Project and laydown construction sites will be watered as frequently as necessary to control fugitive dust. The frequency of watering will be on a minimum schedule of every 2 hours during the daily construction activity period. Watering may be reduced or eliminated during periods of precipitation.	X	
3. Vehicle speeds within the AMSP site will be limited to 5 mph on unpaved areas within the construction zones.	X	
4. The AMSP construction site entrance(s) will be posted with visible speed limit signs.	X	
5. All construction equipment vehicle tires will be inspected and cleaned as necessary to be free of dirt prior to leaving the construction site via paved roadways.	X	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Air Quality (cont.)		
Design Measures (cont.)		
6. Gravel ramps will be provided at the tire cleaning area within the AMSP site.	X	
7. All unpaved exits from the AMSP construction site will be graveled or treated to reduce track-out to public roadways.	X	
8. All construction vehicles will enter the AMSP construction site through the treated entrance roadways, unless an alternative route has been provided.	X	
9 Construction areas adjacent to any paved roadway will be provided with sandbags or other similar measures as specified in the construction Storm Water Pollution Prevention Plan (SWPPP) to prevent runoff to roadways.	X	X
10. All paved roads within the AMSP construction site will be cleaned on a periodic basis (or less during periods of precipitation), to prevent the accumulation of dirt and debris.	X	
11. The first 500 feet of any public roadway exiting the AMSP construction site will be cleaned on a periodic basis (or less during periods of precipitation), using wet sweepers or air-filtered dry vacuum sweepers, when construction activity occurs or on any day when dirt or runoff from the construction site is visible on the public roadways.	X	
12. Any soil storage piles and/or disturbed areas that remain inactive for longer than 10 days will be covered, or shall be treated with appropriate dust suppressant compounds.	X	X
13. All vehicles used to transport solid bulk material on public roadways and that have the potential to cause visible emissions will be covered, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to minimize fugitive dust emissions. A minimum freeboard height of 2 feet will be required on all bulk materials transport.	X	X
14. Wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) will be used on all construction areas that may be disturbed. Any windbreaks installed to comply with this condition will remain in place until the soil is stabilized or permanently covered with vegetation.	X	
15. Disturbed areas will be revegetated or covered with gravel or other dust suppressant material as soon as practical.	X	X
16. The Applicant will work with the construction contractor to utilize to the extent feasible, EPA/CARB Tier II/Tier III engine compliant equipment for equipment over 100 horsepower (hp).	X	X
17. Ensure periodic maintenance and inspections per manufacturer specifications.	X	X
18. Reduce idling time through equipment and construction scheduling.	X	X
19. Use California low sulfur diesel fuels (<=15 parts per million by weight [ppmw] sulfur).	X	X

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Air Quality (cont.)		
Mitigation Measures from the CEC Conditions of Certification – Applicable to AMSP/Lockhart Substation. Refer to Appendix I for MDAQMD conditions.		
AQ-SC1: Air Quality Construction Mitigation Manager (AQCMM): The Project owner shall designate and retain an onsite 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 onsite 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). Verification: 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 onsite AQCMM and all AQCMM Delegates.	X-COC	
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. Verification: 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.	X-COC	
AQ-SC3: Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each Monthly Compliance Report that demonstrates compliance with the AQCMP mitigation measures for the purposes of minimizing fugitive dust emission creation from construction activities and preventing all fugitive dust plumes that will 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 AQCMP required by AQ-SC2, and any deviation from the AQCMP mitigation measures shall require prior CPM notification and approval. 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 nontoxic soil stabilizer or soil weighting agent that can be determined to be both as efficient or more efficient for fugitive dust control as CARB-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 BIO-7) and after active construction activities shall be stabilized with a nontoxic 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 mph on unpaved areas within the construction site, with the exception that vehicles may travel up to 25 mph 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.	X-COC	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Air Quality (cont.)		
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 runoff to roadways, or other similar runoff control measures as specified in the 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 1 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. <u>Verification</u>: 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 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.		
<u>AQ-SC4</u>: 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	X-COC	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Air Quality (cont.)		
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 1 hour of the original determination. The activity shall 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 Project owner 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 1 hour of the original determination, unless overruled by the CPM before that time. Verification: 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.		
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 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 onsite AQCMM showing that the engine meets the conditions set forth herein. b. All construction diesel engines with a rating of 50 hp or higher and lower than 750 hp 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 onsite AQCMM demonstrates that such engine is not available for a particular item of equipment. Engines larger than 750 hp shall meet Tier 2 engine standards. In the event that a Tier 3 engine is not available for any off-road equipment larger than 50100 hp and smaller than 750 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 onsite 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.	X-COC	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Air Quality (cont.)		
3. 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 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 that 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 5 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. Verification: 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 onsite 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.		
AQ-SC6: The Project owner, when obtaining dedicated on-road or off-road vehicles for mirror washing activities and other facility maintenance activities, shall only obtain vehicles that meet California on-road vehicle emission standards or appropriate EPA/California off-road engine emission standards for the latest model year available when obtained. Verification: 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 onsite 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.	X-COC	
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 will be applicable to minimizing fugitive dust emission creation from operation and maintenance activities and preventing all fugitive dust plumes that will not comply with the performance standards identified in AQ-SC4 from leaving the Project site; that:	X-COC	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Air Quality (cont.)		
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 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 mph on these unpaved roadways, with the exception that vehicles may travel up to 25 mph 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 nontoxic 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 nontoxic soil stabilizer or soil weighting agent that can be determined to be as efficient as or more efficient for fugitive dust control than CARB-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. Verification: 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 onsite speed limits.		
AQ-SC8: The Project owner shall provide the CPM copies of all District-issued Authority to Construct (ATC) and Permit to Operate (PTO) documents for the facility. The Project owner shall submit to the CPM for review and approval any modification proposed by the Project owner to any Project Federal air permit. The Project owner shall submit to the CPM any modification to any Federal air permit proposed by the District or EPA, and any revised Federal air permit issued by the District or EPA, for the Project. Verification: The Project owner shall submit any ATC, PTO, and proposed Federal air permit modifications to the CPM within 5 working days of its submittal either by (1) the Project owner to an agency, or (2) receipt of proposed modifications from an agency. The Project owner shall submit all modified ATC/PTO documents and all Federal air permits to the CPM within 15 days of receipt.	X-COC	
AQ-SC9: The Project owner shall offer to pay for temporary equivalent lodging to all residents that are located within 0.25 mile of the Project site fence line during the initial grading/site preparation phase of construction, for those periods of time when the initial grading/site preparation earth-moving activities may occur within 0.25 mile of these residential properties. The Project owner shall contact and provide this offer of temporary lodging to all residents affected by this condition at least 1 month prior to the start of initial grading. Verification: The Project owner shall provide to the CPM, prior to the start of initial grading, a statement signed by the Project owner's project manager stating that the owner or residents of the properties affected by this condition have been notified and that the residents have been offered by the Project owner paid relocation during the affected period of the initial grading/site preparation phase of construction. The statement shall list affected property owners/residents notified and the means of notification. Additionally, in the Monthly Compliance Report the Project owner shall provide documentation regarding any requests from the residents to be relocated for longer periods during construction and the Project owner's actions to evaluate those requests.	X-COC	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Noise		
Construction Phase Noise Control Measures		
1. At least 15 days prior to the start of ground disturbance, the Project proponent, or its designee shall notify all residents within 2 miles of the site, by mail or other effective means, of the commencement of construction. At the same time, a telephone number shall be established for use by the public and included in the notice to report any undesirable noise conditions associated with the construction and operation of the Project and include that telephone number in the above notice.	X	
2. Throughout the construction and operation of the AMSP, Mojave Solar, or it designee, shall document, investigate, evaluate, and attempt to resolve all legitimate, Project-related noise complaints.	X	
3. Mojave Solar, or its designee, shall prepare a noise control program and a statement verifying that the noise control program will be implemented throughout construction of the Project. The noise control program shall be used to reduce employee exposure to high noise levels during construction and also to comply with applicable OSHA and Cal/OSHA standards.	X	
4. Noisy construction work (such as grading, drilling, and heavy lifts) shall be restricted to the period from 7 a.m. to 7 p.m. on weekdays and Saturdays, unless otherwise permitted in accordance with the San Bernardino County Code. If construction work outside of these hours is needed to maintain the overall development schedule, such after-hours construction shall be limited to relatively quiet activities (such as welding, circuit testing, and inspections) so as to not disturb the closest residential receptors.	X	
5. Construction equipment shall have appropriate silencing features or equipment installed and maintained during the course of the construction phase. For example, haul trucks and other enginepowered equipment shall be equipped with adequate mufflers. Stationary compressors and generators shall utilize noise-reduction enclosures or similar noise control features. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust braking shall be limited to emergencies.	X	
6. To minimize construction-related truck traffic noise, stockpiling and vehicle staging areas shall be located at least 200 feet away from occupied residential dwellings or other sensitive receptor locations to reduce annoyances from vehicular traffic. Construction routes will be established to minimize truck movements near residential streets.	X	
7. Mojave Solar, or its designee, will install temporary silencers on air and steam discharge vents during the Commissioning and Initial Start-up Phase of the AMSP. This will reduce noise from the few weeks of air and steam blow cleaning that only occurs during this part of the plant's life cycle.	X	
8. If a traditional, high-pressure steam blow process is employed, Mojave Solar, or its designee, shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 110 dBA measured at a distance of 100 feet. The Project owner shall conduct steam blows only during the hours of 8 a.m. to 5 p.m., unless it can be demonstrated that offsite noise impacts will not cause annoyance.	X	
9. At least 15 days prior to the first steam blow(s), Mojave Solar, or it designee, shall notify all residents within 2 miles of the site of the planned steam blow activity, and shall make the notification available to other area residents in an appropriate manner. The notification may be in the form of letters to the area residences, telephone calls, fliers, or other effective means. The notification shall include a description of the purpose and nature of the steam blow(s), the proposed schedule, the expected sound levels, and the explanation that it is a one-time operation and not a part of normal plant operations.	X	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Noise (cont.)		
Operational Phase Noise Control Measures		
1. Within 90 days of the AMSP achieving a sustained output of 80% or greater of rated capacity, Mojave Solar, or it designee, shall conduct a 25-hour community noise survey, utilizing the same monitoring sites employed in the pre-Project ambient noise survey as a minimum. The survey shall also include the octave band pressure levels to ensure that no new pure-tone noise components have been introduced. A verification survey report will be prepared within 30 days following the completion of the field effort. No single piece of equipment will be allowed to stand out as a source of noise that draws legitimate complaints. Steam relief valves will be adequately muffled to preclude noise that draws legitimate complaints. If the results from the survey indicate that the Project noise levels are in excess of County limits, additional measures may be implemented to reduce noise to a level of compliance. A copy of the verification survey report will be provided to the County of San Bernardino; the County will be kept apprised of progress made toward correcting any noise-related issues.	X	
2. Within 120 days of the AMSP achieving a sustained output of 80% or greater of rated capacity, Mojave Solar, or it designee, shall conduct an occupational noise survey to identify the noise hazardous areas in the facility. The survey will be conducted by a qualified person in accordance with the provisions of Title 8, CCR Sections 5095–5099 and Title 29, CFR Section 1910.95. The survey results will be used to prepare a report and determine the magnitude of employee noise exposure. If necessary, measures will be identified to comply with the applicable California and Federal regulations. The report will be kept on file with the onsite plant manager.	X	
3. Given the very low, late-night noise levels in the vicinity of the AMSP/Lockhart Substation site, the occasional mirror-washing activities will be conducted, if practical, using lower-noise water trucks (i.e., gasoline-powered, natural gas-powered, or electric-powered), rather than diesel-powered trucks. Mirror-washing equipment will have appropriate silencing features or equipment (such as mufflers) installed and maintained. Further, mirror washing in solar field areas closest to residential receptors will be conducted before midnight, if practical.	X	
Geology		
Seismic Safety Design Measures		
1. Power plant structures and equipment will be designed in accordance with seismic requirements of the Alquist-Priolo Earthquake Fault Zoning Act. For new substation construction, specific requirements for seismic design will be followed based on the Institute of Electrical and Electronic Engineers' 693 "Recommended Practices for Seismic Design of Substations."	X	X
2. Project foundations will be designed in accordance with recommendations provided in the final geotechnical design report for the AMSP and Lockhart Substation.	X	X
Erosion Control During Construction Phase		
1. Local soil berms and a detention area will be constructed to contain stormwater runoff. X	X	
2. Site grading, clearing, and grubbing will be confined to only those areas needed for facility construction as indicated in the conceptual grading plan.	X	
3. Temporary erosion controls including crushed rock, silt fences and fiber rolls will be used as needed to minimize erosion in active grading areas. Soil stockpiles will be covered prior to forecasted storm events and during windy conditions. Fiber rolls or gravel bags will be placed around the perimeter of the stockpiles to further minimize the potential for runoff.	X	

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Geology (cont.)		
Erosion Control During Construction Phase (cont.)		
4. Additionally, water will be used to control dust and will be applied at a rate to minimize runoff.	X	
5. An erosion control plan will be developed and implemented to ensure minimum soil loss and to maintain water quality. Temporary and long-term erosion control measures will be constructed and maintained as necessary during and following construction until long-term stabilization has been established.		
Paleontology		
1. Prior to the start of any Project-related construction (defined as construction-related vegetation clearing, ground disturbance and preparation, and site excavation activities), the Project owner will ensure that the paleontological resource specialist is available for field activities and prepared to implement these measures. The paleontological resource specialist will be responsible for implementing all the paleontological measures and for using qualified personnel to assist in this work.	X X	X[1]
2. Prior to the start of construction, a Paleontological Resource Monitoring and Mitigation Plan will be prepared by a paleontological resource specialist. The plan will identify general and specific measures to minimize potential impacts to sensitive paleontological resources. The Project paleontological resource specialist will implement the Paleontological Resource Monitoring and Mitigation Plan as needed. The Paleontological Resource Monitoring and Mitigation Plan will include, but not be limited to, the following elements and measures. • A discussion of the sequence of Project-related tasks, such as any preconstruction surveys, fieldwork, flagging or staking; construction monitoring; mapping and data recovery; fossil preparation and recovery; identification and inventory; preparation of final reports; and transmittal of materials for curation; • Identification of the person(s) expected to assist with each of the tasks identified within this condition, and a discussion of the mitigation team leadership and organizational structure, and the interrelationship of tasks and responsibilities; • Where monitoring of Project construction activities is deemed necessary, the extent of the areas where monitoring is to occur and a schedule for the monitoring; • An explanation that the designated paleontological resource specialist shall have the authority to halt or redirect construction in the immediate vicinity of a vertebrate fossil find until the significance of the find can be determined; • A discussion of the equipment and supplies necessary for the recovery of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits; • Inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum that meets the SVP standards and requirements for the curation of paleontological resources; and • Identification of the institution (expected to be the SBCM) that has agreed to receive any data and fossil materials recovered during Project-related monitoring and mitigation work, discussion of any requirements of 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.	X	X[1]
3. Prior to the start of construction, the paleontological resource specialist will prepare a staff training program. The paleontological training program will address the potential to encounter paleontological resources in the field, the sensitivity and importance of these resources, and the legal obligations to preserve and protect such resources. The training program will also include the set of reporting procedures that workers are to follow if paleontological resources are encountered during Project activities.	X	X[1]

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Paleontology (cont.)		
4. During construction, the designated paleontological resource specialist or paleontological monitor will monitor construction-related grading, excavation, trenching, and/or augering in areas with a significant potential for fossil-bearing sediments to occur. All ground disturbances in Quaternary older alluvium (greater than 5 feet in depth) and Quaternary lake deposits will be monitored on a full-time basis because of their high paleontological sensitivity. All ground disturbances in Quaternary younger alluvium (at or less than 5 feet in depth) will be spot-checked by paleontological monitors. Paleontological monitoring will include inspection of exposed rock units and microscopic examination of matrix to determine if fossils are present. Paleontological monitors will have authority to temporarily divert excavations or drilling away from exposed fossils in order to efficiently and professionally recover the fossil specimens and collect associated data.	X	X[1]
5. The Project owner, through the designated paleontological resource specialist, will ensure recovery, preparation for analysis, analysis, identification and inventory, the preparation for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during the monitoring, data recovery, mapping, and mitigation activities related to the Project.	X	X[1]
6. The Project owner will ensure preparation of a Paleontological Resources Report by the designated paleontological resource specialist following the analysis of the recovered fossil materials and related information. The report will include a description and inventory list of recovered fossil materials, a map showing the location of paleontological resources found in the field, determinations of sensitivity and significance, and a statement by the paleontological resource specialist that Project impacts to paleontological resources have been mitigated.	X	X[1]
Water Resources		
1. Initially, grading will proceed in a systematic manner in those areas needed for site construction and operation. Undisturbed areas will remain so until being actively graded.	X	
2. Berms are proposed to be used along slopes or check structures to control sediment loss and erosion. As indicated for the storm channel sections, riprap gabions or other erosion control measures will be used to minimize scour and erosion.	X	
3. Roads and paved areas are proposed to be kept free of dust, dirt, and visible soil materials. A stabilized construction entrance/exit shall be constructed and maintained. Stabilized construction roadways will be used throughout the Project site and maintained throughout the construction period. Water is proposed to be used to control fugitive dust emissions and applied as to minimize and control water runoff.	X	
4. BMPs are proposed to be applied and, if necessary, repaired as soon as erosion is evident or a particular measure fails. Temporary erosion control measures are proposed as well and temporary sediment control materials are proposed to be maintained onsite throughout the construction period to respond as needed to unforeseen rain or emergencies.	X	
5. The AMSP will develop and implement a Channel Maintenance Program for routine maintenance of the storm water channels to protect the integrity of the channels from erosion and sedimentation.	X	
Biological Resources		
1. Designated Biologist Selection BIO-1: The project owner shall assign a Designated Biologist to the project. The project owner shall submit the resume of the proposed Designated Biologist, with at least three references and contact information, to the Energy Commission Compliance Project Manager (CPM), CDFG, and USFWS for approval. The Designated Biologist must meet the following minimum qualifications: a. Bachelor's Degree in biological sciences, zoology, botany, ecology, or a closely related field; and	X-COC	X

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
b. 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; c. At least one year of field experience with biological resources found in or near the project area; d. Meet current USFWS Authorized Biologist criteria and demonstrate familiarity with protocols and guidelines for the desert tortoise; and e. Possess a recovery permit for desert tortoise and a California ESA Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise and Mohave ground squirrel or have adequate experience and qualifications to obtain these authorizations. It is possible that two biologists may be utilized – each with an MOU for desert tortoise or MGS. In lieu of the above requirements, the resume shall demonstrate to the satisfaction of the CPM, that the proposed Designated Biologist or alternate has the appropriate training and background to effectively implement the conditions of certification.		
2. Designated Biologist Duties BIO-2: The project owner shall ensure that the Designated Biologist performs the following during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, and closure activities. The Designated Biologist may be assisted by the approved Biological Monitor(s), but remains the contact for the project owner and CPM. a. Advise the project owner's Construction and Operation Managers on the implementation of the biological resources conditions of certification; b. Consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), to be submitted by the project owner; c. 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; d. Halt any and all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued or a violation of federal or state environmental laws or a violation of any environmental agreements/conditions made between the applicant and the CPM and/or the regulatory agencies; e. Clearly mark sensitive biological resource areas, if present and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions; f. 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 (i.e. parking lots) for animals in harm's way; g. Notify the project owner and the CPM of any non-compliance with any biological resources condition of certification; h. Respond directly to inquiries of the CPM regarding biological resource issues; X-COC X i. 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 Report; and j. Train the Biological Monitors as appropriate, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training and all permits.	X-COC	X

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
3. Biological Monitor Selection, Qualifications, and Duties BIO-3: The project owner's CPM-approved Designated Biologist shall submit the resume, at least three references and contact information, of the proposed Biological Monitors to the CPM, CDFG, and USFWS for approval. The resume shall demonstrate to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks, including: • Biological Monitor(s) involved in any aspect of desert tortoise surveys or handling must meet the criteria to be considered a USFWS Authorized Biologist (USFWS 2008) and demonstrate familiarity with the most recent protocols and guidelines for the desert tortoise. • Biological Monitor(s) involved in any aspect of Mohave ground squirrel surveys or handling must possess a California ESA Memorandum of Understanding pursuant to Section 2081(a) for Mohave ground squirrel or have adequate experience and qualifications to obtain this authorizations. • Biological Monitor(s) training by the Designated Biologist shall include familiarity with the conditions of certification and the Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP), Worker Environmental Awareness Program (WEAP), and all permits. • The Biological Monitors shall assist the Designated Biologist in conducting surveys and in monitoring of site mobilization activities, construction-related ground disturbance, grading, boring or trenching. The Designated Biologist shall remain the contact for the Project owner, BLM's Authorized Officer and the CPM.	X-COC	X
4. Designated Biologist and Biological Monitor Authority BIO-4: The project owner's Construction/Operation Manager shall act on the advice of the Designated Biologist and Biological Monitor(s) to ensure conformance with the biological resources conditions of certification. If required by the Designated Biologist and Biological Monitor(s) the project owner's Construction/Operation Manager shall halt all site mobilization, ground disturbance, grading, construction, and operation activities in areas specified by the Designated Biologist. The Designated Biologist shall: a. Halt any and all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued or a violation of federal or state environmental laws or a violation of any environmental agreements/conditions made between the applicant and the CPM and/or the regulatory agencies; b. Inform the project owner and the Construction/Operation Manager when to resume activities; and c. Notify the CPM if there is a halt of any activities, and advise the CPM of any corrective actions that have been taken, or will be instituted, as a result of the work stoppage. d. If the Designated Biologist is unavailable for direct consultation, the Biological Monitor shall act on behalf of the Designated Biologist. It is expected that the Designated Biologist will be onsite during construction or otherwise available by phone.	X-COC	X
5. Worker Environmental Awareness Program BIO-5: The project owner shall develop and implement a CPM-approved Worker Environmental Awareness Program (WEAP) in which each of its employees, as well as employees of contractors and subcontractors who work on the project site or any related facilities during site mobilization, ground disturbance, grading, construction, operation, and closure are informed about sensitive biological resources associated with the project. The WEAP must: a. 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 is made available to all participants; b. Discuss the locations and types of sensitive biological resources on the project site and adjacent areas, if present; c. Present the reasons for protecting these resources;	X-COC	X

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
d. Present the meaning of various temporary and permanent habitat protection measures as necessary; e. Discuss penalties for violation of applicable LORS (e.g., federal and state endangered species acts); f. Identify whom to contact if there are further comments and questions about the material discussed in the program; and g. 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.		
6. Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP): Development and Compliance BIO-6 The project owner shall develop a BRMIMP and submit two copies of the proposed BRMIMP to the CPM (for review and approval) and to CDFG and USFWS (for review and comment) if applicable and shall implement the measures identified in the approved BRMIMP. A copy of the BRMIMP shall be kept onsite and made readily available to biologists, regulatory agencies, the project owner, contractors, and subcontractors as needed. The BRMIMP shall be prepared in consultation with the Designated Biologist and shall identify: a. All biological resource mitigation, monitoring, and compliance measures proposed and agreed to by the project owner; b. All applicant-proposed mitigation measures presented in the Application for Certification, data request responses, and workshop responses [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-6]; c. All biological resource conditions of certification identified as necessary to avoid or mitigate impacts [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-6]; d. All biological resource mitigation, monitoring, and compliance measures required in federal agency terms and conditions, such as those provided in the Biological Opinion; e. All biological resource mitigation, monitoring, and compliance measures required in local agency permits, such as site grading and landscaping requirements; f. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation, and closure; g. All required mitigation measures for each sensitive biological resource; h. A detailed description of measures that shall be taken to avoid or mitigate temporary disturbances from construction activities; i. All locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction; j. Aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities — one set prior to any site (and related facilities) mobilization disturbance and one set subsequent to completion of project construction. Include planned timing of aerial photography and a description of why times were chosen; k. Duration for each type of monitoring and a description of monitoring methodologies and frequency; l. Performance standards to be used to help decide if/when proposed mitigation is or is not successful; m. All performance standards and remedial measures to be implemented if performance standards are not met;	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
n. A preliminary discussion of biological resources-related facility closure measures; and o. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval.		
7. Impact Avoidance and Minimization Measures BIO-7: The project owner shall implement the following measures during construction and operation to manage their project site and related facilities in a manner to avoid or minimize impacts to the local biological resources: a. *Limit Disturbance Area.* The boundaries of all areas to be temporarily or permanently disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the Designated Biologist. Spoils shall be stockpiled in disturbed areas, 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, vehicles, and equipment shall be confined to the flagged areas. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7] b. *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 will do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads (e.g., new spur roads) or the construction zone, the route will be clearly marked (i.e., flagged and/or staked) prior to the onset of construction. c. *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 on Harper Lake Road and within fenced areas that have been cleared of tortoises and other wildlife. The speed limit shall not exceed 15 miles per hour within unfenced areas and secondary unpaved access roads. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7] d. *Monitor During Construction*. 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 USFWS-approved Designated Biologist or Biological Monitor shall closely monitor vegetation removal and grading activities to prevent wildlife injury or mortality. e. *Minimize Impacts of Transmission/Pipeline Alignments, Roads, 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. Temporary disturbance areas, if necessary, shall occur within the project site and shall be designed, installed, and maintained with the goal of minimizing disturbance. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) Suggested Practices for Avian Protection on Power Lines (APLIC 2006) and Mitigating Bird Collisions with Power Lines (APLIC 2004) to reduce the likelihood of bird electrocutions and collisions. f. *Avoid Use of Toxic Substances*. Road surfacing and sealants as well as soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7] g. *Minimize Lighting Impacts*. Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards the project boundaries and the Harper Dry Lake marsh. Lighting shall be shielded, directional, and at the lowest intensity required for activity. h. *Avoid Vehicle Impacts to Desert Tortoise*. Parking and storage shall occur within 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. During construction, a Biological Monitor shall drive along project access roads, particularly	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
Harper Lake Road at least every three hours during the desert tortoise active period (April through May and September through October) looking for desert tortoise or other vulnerable wildlife within the roadway. Outside of the active period, roads shall be monitored at least twice a day in advance of peak AM and PM traffic periods. During operation, employees shall report any desert tortoise sightings along roadways to the Biological Monitor. If a desert tortoise is observed in the roadway or beneath a parked vehicle, it will be left to move on its own or a Biological Monitor may remove and transfer the animal to a safe location if temperatures are within the appropriate range as identified in the Final Desert Tortoise Clearing and Translocation Plan.		
i. *Avoid Wildlife Pitfalls*. At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the permanently fenced area 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 tortoise-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with desert tortoise exclusion fencing shall be inspected at the beginning of each workday, periodically throughout, and at the end of each workday by the Designated Biologist or a Biological Monitor. Should a tortoise or other wildlife become trapped, the Designated Biologist or Biological Monitor shall remove and relocate the individual to a safe location. Any wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.		
j. *Avoid Entrapment of Wildlife*. Any construction pipe, culvert, or similar structure with a diameter greater than three inches, stored less than eight inches above ground for one or more days/nights, shall be inspected for wildlife before the material is moved, buried, or capped. As an alternative, all such structures may be capped before being stored, or placed on pipe racks. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7]		
k. *Report Wildlife Injury and Mortality*. All inadvertent deaths of sensitive species, including road kill, shall be reported to the appropriate project representative. Species name, physical characteristics of the animal (sex, age class, length, weight), and other pertinent information shall be noted and reported in the Monthly Compliance Reports. Injured animals shall be reported to CDFG or USFWS and the CPM and the project owner shall follow instructions that are provided by CDFG or USFWS. If CDFG or USFWS cannot be immediately reached, consideration should be given to taking the animal to a veterinary hospital. If any golden eagles are recovered dead, they shall be sent to the National Eagle Repository after cause of death has been investigated.		
l. *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, common ravens, and other wildlife to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and attract desert tortoise, common ravens, and other wildlife to the site and shall take appropriate action to reduce water application where necessary. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7]		
m. *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 cleaned up immediately 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.		
n. *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. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7]		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
o. *Avoid Spread of Noxious Weeds*. The project owner shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds **~~[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7]~~**: • Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes; • Reestablish vegetation **~~quickly~~** on disturbed sites **and** temporarily disturbed areas, including pipelines, transmission lines, and staging areas **in an ecologically time-sensitive manner based on environmental conditions, with the understanding that any analysis of the potential introduction of invasive plants from work on a linear project would need to a) be done based on the practical limitations of linear, noncontiguous work, and b) account for adjacent environmental conditions (i.e., distinguish between existing invasive populations in the area and any potential introduction attributable to the linear project work)** (see BIO-9); • Prevent spread of non-native plants via vehicular sources by implementing TrackcleanTM or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the construction site. The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s); • Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations; • Invasive non-native species shall not be used in landscaping plans and erosion control; and • Monitor and rapidly implement control measures to ensure early detection and eradication of weed invasions. p. *Implement Erosion Control Measures*. Standard erosion control measures shall be implemented for all phases of construction and operation. 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) with slopes toward an ephemeral drainage or Harper Dry Lake shall be stabilized to reduce erosion potential. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7] q. *Monitor Ground Disturbing Activities Prior to Site Mobilization*. If ground disturbing activities are required prior to site mobilization, 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. Actions not included in the project description are prohibited. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-7]		
8. Pre-Construction Nest Surveys and Impact Avoidance and Minimization Measures for Migratory Birds BIO-8: Pre-construction nest surveys shall be conducted if construction activities will occur from February 1 through August 1. At all times of the year, noise generating activities shall be limited during early morning and evening to avoid impacts to birds protected under the Migratory Bird Treaty Act. The Designated Biologist or Biological Monitor shall perform surveys in accordance with the following guidelines: a. Surveys shall cover all potential nesting habitat in the project site and within 500 feet of the boundaries of the plant site as well as any areas potentially exposed to noise levels above 60 dBA [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-8]; b. At least two pre-construction surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys needs to be conducted within the 10-day period preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation; c. If active nests are detected during the survey, a no-disturbance buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFG and USFWS) and monitoring plan shall be developed. Nest locations shall be mapped using GPS technology and submitted, along with a weekly report stating the survey results, to the CPM; and d. The Designated Biologist or Biological Monitor 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 in consultation with the CPM, disturb nesting activities (e.g., excessive noise above 60 dBA), shall be prohibited within the buffer zone until such a determination is made.	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
9. Golden Eagle Territory-Specific Management Plan BIO-9: In addition to the breeding season golden eagle inventory conducted in spring 2010 (per USFWS protocol [Pagel et al. 2010]), a nonbreeding season golden eagle inventory survey shall be conducted in late-summer/ early-winter 2010 (USFWS, in prep). If an occupied golden eagle territory is identified within 10 miles of the project site (except for the territory identified at Black Mountain in April 2010) during breeding or non-breeding inventory surveys for the AMS project, the project owner shall prepare and implement a Golden Eagle Territory-Specific Management Plan. This plan shall: a. Include measures to avoid and minimize disturbance (as defined in 50 CFR 22.3) to golden eagles during project construction and operation activities. Measures may include limited operating periods or no-disturbance buffers within which certain potentially disruptive project activities shall not be conducted, or modification of certain project activities to reduce the potential for disturbance to eagles. b. Identify monitoring actions and schedule for their implementation to ensure avoidance and minimization of disturbance. Monitoring and reporting shall be conducted pre- and post-activity per Interim Golden Eagle Inventory and Monitoring Protocols (Pagel et al. 2010).	X-COC	
10. Documentation of Bald and Golden Eagle Act Compliance BIO-10: The project owner shall provide documentation to the CPM that the project is in compliance with the Bald and Golden Eagle Protection Act (Title 16, United States Code, sections 668-668d).	X-COC	
11. Desert Tortoise Exclusion Fencing, Clearance Surveys, and Translocation Plan BIO-11: A Desert Tortoise Exclusion Fencing, Clearance Surveys, and Translocation Plan (Desert Tortoise Plan) shall be developed in consultation with the CPM, CDFG, and USFWS. This plan shall include detailed measures to avoid and minimize impacts to desert tortoise in and near the construction areas as well as methods for clearance surveys, fence installation, tortoise handling, artificial burrow construction, egg handling and other procedures, which shall be consistent with those described in the USFWS Desert Tortoise Field Manual (www.fws.gov/ventura/speciesinfo/protocols_guidelines) or more current guidance provided by CDFG and USFWS. At a minimum, the following measures shall be included in the plan and implemented by the project owner to manage their construction site, and related facilities, in a manner to avoid, minimize, or mitigate impacts to desert tortoise. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11] 1. *Fence Installation*. Prior to ground disturbance, the entire project site shall be fenced with desert tortoise exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. Surveys shall be conducted by the Designated Biologist using techniques approved by the USFWS and CDFG. Biological Monitors may assist the Designated Biologist under his or her supervision. These surveys shall provide 100% coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. This fence line transect shall cover an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 30 feet apart. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11] All desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined to assess occupancy of each burrow by desert tortoises and handled in accordance with USFWS-approved protocol. A. Timing and Supervision of Fence Installation. The exclusion fencing shall be installed prior to site clearing and grubbing. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11] B. Fence Material and Installation. The permanent tortoise exclusionary fencing shall consist of galvanized hard wire cloth 1 by 2 inch mesh sunk 12 inches into the ground, and 24 inches above ground (refer to parameters for USFWS-approved tortoise exclusion fencing at www.fws.gov/ventura/speciesinfo/protocols_guidelines). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11]	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
For temporary exclusion fencing, a "folded bottom" technique shall be implemented. This method follows the same guidelines as installation of permanent fencing except instead of burying the bottom 12 inches of the fencing, it is bent at a approximately 90 degree angle (to follow the contour of the ground) and spikes or other retaining methods are driven into the ground every two linear feet in such a manner as to "anchor" the bottom of the fence. This method eliminates the need for trenching, which for short-term temporary impacts may be more beneficial to the recovery of the landscape, and thus the species.		
C. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates shall remain closed except during vehicle passage and may be electronically activated to open and close immediately after vehicle(s) have entered or exited to prevent extended periods with open gates, which might lead to a tortoise entering. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11]		
D. Stormwater Drainage Fencing. The onsite stormwater drainage channels, including the headwalls, outlet, and road crossings, shall be permanently fenced to ensure exclusion of desert tortoise during AMS operation. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11]		
E. Fence Inspections. Following installation of the desert tortoise exclusion fencing for the permanent site and stormwater drainage fencing and temporary fencing (if required), the fencing shall be regularly inspected. Permanent fencing shall be inspected monthly and during/immediately following all major rainfall events. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within two days of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing must be inspected immediately 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 enclosed by the fence for tortoise. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11]		
2. *Desert Tortoise Clearance Surveys*. Following construction of the tortoise exclusionary fencing around the Plant Site, all fenced areas shall be cleared of tortoises by the Designated Biologist, who may be assisted by Biological Monitors. A minimum of two, 100 percent coverage protocol clearance surveys with negative results must be completed and these must coincide with heightened desert tortoise activity from April through May and September through October. Non-protocol clearance surveys may be conducted in areas of certainly unsuitable habitat (e.g., developed) with prior approval of specific areas by USFWS and CDFG (these proposed areas shall be identified in the draft Desert Tortoise Plan). Clearance survey transects shall be followed as described in the Final Desert Tortoise plan. Additional clearance survey guidelines area provided in the USFWS Desert Tortoise Field Manual (www.fws.gov/ventura/speciesinfo/protocols_guidelines). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11]		
Translocation of Desert Tortoise. If desert tortoises are detected during clearance surveys within the project impact area, the Designated Biologist shall safely translocate the tortoise the shortest possible distance to the nearest suitable habitat. Any handling efforts shall be in accordance with techniques described in the final Desert Tortoise Plan, which shall be consistent with the USFWS Desert Tortoise Field Manual (www.fws.gov/ventura/speciesinfo/protocols_guidelines). If a visibly diseased tortoise is encountered onsite, procedures shall be implemented in accordance with the approved final Desert Tortoise Plan.		
3. *Burrow Inspection*. All potential desert tortoise burrows within the fenced area shall be searched for presence. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined, in accordance with the final Desert Tortoise Plan. Immediately following excavation and if environmental conditions warrant immediate translocation, tortoises excavated from burrows shall be translocated to unoccupied natural or artificial burrows within the location approved by USFWS and CDFG per the final Desert Tortoise Plan. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11]		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
4. *Burrow Excavation*. Burrows inhabited by tortoises shall be excavated by the Designated Biologist using hand tools, and then collapsed or blocked to prevent re-occupation, in accordance with the final Desert Tortoise Plan. If excavated during May through July, the Designated Biologist shall search for desert tortoise nests/eggs. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the Designated Biologist in accordance with the USFWS Desert Tortoise Field Manual (www.fws.gov/ventura/speciesinfo/protocols_guidelines). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11] 5. *Monitoring During Clearing*. Following the installation of exclusionary fencing and after ensuring desert tortoises are absent from the project site, heavy equipment shall be allowed to enter the project site to perform earth work such as clearing, grubbing, leveling, and trenching. A Biological Monitor shall be onsite at all times during initial clearing and grading activities. Should a tortoise be discovered, it shall be relocated as described above in accordance with the final Desert Tortoise Plan. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-11] 6. *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 tortoise as described in the paragraph below. Desert tortoise moved from within project areas shall be marked for future identification as described in USFWS Desert Tortoise Field Manual (www.fws.gov/ventura/speciesinfo/protocols_guidelines). Digital photographs of the carapace, plastron, and fourth costal scute shall be taken. Scutes shall not be notched for identification.		
12. Mohave Ground Squirrel Clearance Surveys BIO-12: The project owner shall implement the following measures to manage their construction site, and related facilities, in a manner to avoid or minimize impacts to Mohave ground squirrels (MGS): 1 *Clearance Survey*. After the installation of the desert tortoise exclusion fence and immediately prior to any ground disturbance, the Designated Biologist(s) shall examine the construction disturbance area for MGS and their burrows. The survey shall provide 100 percent coverage of suitable habitat within the project site (undisturbed desert saltbush scrub, disturbed desert saltbush scrub, disturbed desert saltbush scrub regrowth, fallow agriculture-saltbush scrub regrowth). A. If potentially occupied burrows are identified, an attempt shall be made to trap and relocate the individual(s). Potentially occupied burrows shall be fully excavated by hand. B. Trapping, relocation, and MGS burrow excavation shall only be conducted by individual(s) possessing an MOU with CDFG for such activities. 2. *Records of Capture*. If MGS are captured via trapping or burrow excavation, the Designated Biologist shall maintain a record of each Mohave ground squirrels handled, including: a) the locations (Global Positioning System [GPS] coordinates and maps) and time of capture and/or observation as well as release; b) sex; c) approximate age (adult/juvenile); d) weight; e) general condition and health, noting all visible conditions including gait and behavior, diarrhea, emaciation, salivation, hair loss, ectoparasites, and injuries; and f) ambient temperature when handled and released. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-12] 3. *Relocation*. Any MGS captured via trapping or burrow excavation shall be relocated to suitable habitat adjacent to the project site, which provides conditions suitable for the long-term survival of relocated MGS. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-12]	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
13. Burrowing Owl Impact Avoidance, Minimization and Mitigation Measures BIO-13: Prior to preconstruction surveys, a Burrowing Owl Monitoring and Mitigation Plan (Burrowing Owl Plan) shall be developed by the project owner in consultation with the CPM and CDFG. This plan shall include detailed measures to avoid and minimize impacts to burrowing owls in and near the construction areas (if indentified during surveys) and shall be consistent with CDFG guidance (CDFG 1995). In addition, the plan shall identify the optimal time to concurrently relocate both desert tortoise and burrowing owl. At a minimum, the following measures shall be included in the plan and implemented by the project owner to manage their construction site, and related facilities, in a manner to avoid, minimize, or mitigate impacts to breeding and foraging burrowing owls. 1. *Pre-Construction Surveys and Nest Avoidance*. The Designated Biologist shall conduct preconstruction surveys for burrowing owls within the project site and a 160-foot buffer. These surveys shall be conducted concurrent with desert tortoise clearance surveys, to the maximum extent possible. The following shall be included in the Plan and implemented to avoid and minimize impacts to burrowing owls onsite: A. Pre-construction surveys shall be conducted prior to the nesting season (February 1 through August 31) and all burrowing owls will be passively relocated using one-way trap doors. Once the Designated Biologist has verified that all burrowing owls have vacated an occupied burrow, the Designated Biologist shall collapse the burrow, preventing reoccupation. B. If ground disturbance cannot be avoided in areas where nesting burrowing owls are active, a 250-foot exclusion area around occupied burrows will be flagged and this area will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival. The exclusion area shall remain connected to natural area(s) to the extent possible, to avoid completely surrounding the owl with construction activities and/or equipment. **~~[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-13]~~** 2. *Artificial Burrow Installation*. Prior to any ground-disturbing activities, the project owner shall install five artificial burrows for each identified burrowing owl burrow in the project area that would be destroyed, within in the approved compensatory habitat area. The Designated Biologist shall survey the site selected for artificial burrow construction to verify that such construction will not affect desert tortoise or Mohave ground squirrel or existing burrowing owl colonies in the relocation area. Installation of the artificial burrows shall occur after baseline surveys of the relocation area and prior to ground disturbance or heavy equipment staging. Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG 1995) and shall be approved by the CPM in consultation with CDFG. **~~[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-13]~~** 3. *Passive Relocation*. Prior to passive relocation, any owls that will be relocated shall be color banded with air-craft aluminum bands in accordance with the guidance provided by USGS bird banding lab (http://www.pwrc.usgs.gov/bbl) to monitor relocation success. Color banding shall not be conducted during the breeding season. During the non-breeding season, owls would be given a minimum of three weeks to become familiar with the new artificial burrows, after which eviction of owls within the project site could begin. Use of one-way doors described by Trulio (1995) and Clark and Plumpton (2005) would be used to facilitate passive relocation of owls. A. Monitoring and Success Criteria. The Designated Biologist shall survey the compensatory mitigation area and a suitable habitat within a 600 meter radius from the project site to assess use of the artificial burrows by owls and relocation success after exclusion from the project area. Surveys shall be conducted using methods consistent with Phase II and Phase III California Burrowing Owl Consortium guidelines (CBOC 1993). Surveys shall be conducted two times in the spring and two times in the winter following eviction. The second survey within a season shall be conducted within 30 days of the first. Surveys shall continue for a period of two years to encompass a total of two spring seasons (4 total spring surveys) and two winter seasons (4 total winter surveys). Surveys and monitoring shall be conducted using non-invasive methods (i.e., high-powered binoculars, spotting scope, or camera). Owls shall	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
not be trapped or otherwise handled to read the color band. If survey results indicate burrowing owls are not nesting within the surveyed area, remedial actions may be developed and implemented in consultation with the CPM, CDFG and USFWS to correct conditions at the site that might be preventing owls from nesting there. A report describing survey results and any remedial actions taken shall be submitted to the CPM, CDFG and USFWS no later than January 31 of each year for two years. 4. *Preserve and Manage Compensatory Habitat*. For each individual owl or pair identified on the project site during pre-construction surveys, off-site mitigation shall be required as described in the California Burrowing Owl Consortium guidelines (CBOC 1993). Determining which ratio to apply depends on whether the proposed compensatory habitat is occupied or unoccupied. A. Replacement of occupied habitat with occupied habitat: 1.5 times 6.5 (9.75) acres per pair of single bird B. Replacement of occupied habitat with suitable unoccupied habitat: 3 times 6.5 (19.5) acres per pair of single bird. Compensatory habitat shall be suitable for occupation by burrowing owls and preserved and managed in perpetuity for this purpose. Compensatory mitigation may be within the 118.2 acres proposed for desert tortoise and MGS (refer to BIO-15), provided that it also meets the criteria for suitable burrowing owl habitat. The compensatory habitat shall be managed for the benefit of burrowing owls, with the specific goals of: A. Maintaining the functionality of artificial and natural burrows; and B. Minimizing the occurrence of weeds (species considered "moderate" or "high" threat to California wildlands as defined by CAL-IPC [2006] and noxious weeds rated "A" or "B" by the California Department of Food and Agriculture and any federal-rated pest plants [CDFA 2009]) at less than 10% cover of the shrub and herb layers. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-13] The Burrowing Owl Plan shall also include monitoring and maintenance requirements for the compensatory habitat, details on methods for measuring compliance goals, and remedial actions to be taken if management goals are not met. The final Burrowing Owl Plan is due before preconstruction surveys begin to ensure that an approved relocation methodology will be followed for any owls occurring within the project area. Therefore, it is understood that the compensatory mitigation acreage (if required) may not be identified in the Burrowing Owl Plan. However, the Plan shall propose a location for compensatory mitigation land and the acreage required, quantified according to the CBOC methods outlined above. If owls are identified during the pre-construction survey, the project owner shall submit an addendum to the Burrowing Owl Plan, which identifies the number of owls identified and the exact acreage to be preserved and managed in perpetuity for burrowing owl based on the results of the preconstruction survey and as agreed to in consultation with CDFG.		
14. American Badger and Desert Kit Fox Impact Avoidance and Minimization Measures BIO-14: To avoid direct impacts to American badgers and desert kit fox, preconstruction surveys shall be conducted for these species concurrent with the desert tortoise surveys. Surveys shall be conducted as described below: Biological Monitors shall perform pre-construction surveys for badger setts and kit fox burrows in the project area, including areas within 250 feet of the project site. If burrows are detected, each burrow shall be classified as inactive, potentially active, or definitely active. Inactive burrows and setts that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badgers or kit fox. Potentially and definitely active burrows and setts shall not be disturbed during the whelping/pupping season (February 1 – September 30). 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 Biological Monitor shall directly observe	X-COC	X

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
the burrow or sett and block the entrance after the animal exits and the Biological Monitor has verified that there are no animals in the burrow or sett. The burrow or den shall be blocked with natural materials (e.g., rocks, dirt, sticks, and vegetation piled in front of the entrance) or passive hazing methods shall be employed for the next three to five nights to discourage the badger or kit fox from continued use. Passive hazing methods shall be approved by CDFG. Live or other traps shall not be used (CCR Title 14 Section 460). A kit fox or badger shall never be trapped in its burrow/sett. 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.		
15. Compensatory Mitigation BIO-15: To fully mitigate for habitat loss and incidental take of desert tortoise and Mohave ground squirrel as well as burrowing owl, the project owner shall acquire, prior to ground-disturbing activities, in fee or in easement, no less than 118.2 acres of land suitable for these species and shall provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. If habitat disturbance exceeds that described in this analysis, the project owner shall be responsible for acquisition and management of additional compensation lands and/or additional funds required to compensate for any additional habitat disturbances. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. Agreements to delegate land acquisition or management shall be implemented within 12 months of the Energy Commission's decision. The acquisition and management of compensation lands shall include, but is not limited to, the following elements [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15] 1. *Selection Criteria for Compensation Lands*. The compensation lands selected for acquisition ortitle/easement transfer shall: A. have substantial capacity to support resident and dispersing desert tortoise, MGS, and burrowing owl; B. be a contiguous block of land (preferably) or located so that parcel(s) result in a contiguous block of protected habitat; [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15]: C. not be encumbered by easements or uses that will preclude fencing of the site or preclude management of the site for the primary benefit of the species for which mitigation lands were secured; and D. include mineral/water rights or ensure that those rights may not be evoked in a manner to negate the value of the compensation lands. 2. *Review and Approval of Compensation Lands Prior to Acquisition or Title/Easement Transfer*. A minimum of three months prior to acquisition or transfer of the property title and/or easement, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a proposal to the CPM, CDFG, and USFWS describing the parcel(s) intended for purchase or title/easement transfer. This proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for desert tortoise, MGS, and burrowing owl in relation to the criteria listed above. Approval from the CPM, in consultation with USFWS and CDFG, shall be required for acquisition of all parcels comprising no less than 118.2 acres in advance of purchase or title/easement transfer. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15] 3. *Review and Approval of Compensation Lands Management Plan*. Within six months of the land or easement purchase or transfer, as determined by the date on the title, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a compensation lands management plan to the CPM, CDFG, and USFWS. The plan shall include, but not be limited to proposed measures to enhance habitat (e.g., removal of structures and other human attractants); maintenance procedures; general maintenance provisions (e.g., trash dumping, trespass, pesticide use avoidance, etc.). 4. *Mitigation. Security for Compensation Lands and Avoidance/Minimization Measures*. The project owner shall provide financial assurances to the CPM, with copies of the document(s) to CDFG and USFWS, to guarantee that an adequate level of funding is available to implement all biological avoidance, minimization, and compensation measures described in the conditions of certification**.** These funds shall be used solely for implementation of the measures associated with the project. The project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating ground-disturbing project activities.	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
5. *Conditions for Acquisition of Compensation Lands*. The project owner shall comply with the following conditions relating to acquisition of compensation lands or transfer of the property's title and/or easement after the CPM, in consultation with CDFG and USFWS, has approved the proposed compensation lands as described above. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15]		
A. Preliminary Report: The project owner, or approved third party, shall provide a recent preliminary title report (no more than six months old), hazardous materials survey report (i.e., Phase I ESA), biological analysis, and other necessary documents for the proposed 118.2 acres. All documents conveying or conserving compensation lands and all conditions of title/easement are subject to a field review and approval by the CPM, in consultation with CDFG and USFWS, California Department of General Services and, if applicable, the Fish and Game Commission and/or Wildlife Conservation Board. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15]		
B. Title/Conveyance: The project owner shall transfer fee title/deed or a conservation easement for the 118.2 acres of compensation lands to CDFG under terms approved by CDFG. Alternatively, a CPM-approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 may hold fee title or a conservation easement over the compensation lands. In the event an approved nonprofit holds title, a conservation easement shall be recorded in favor of CDFG in a form approved by CDFG and USFWS; in the event an approved nonprofit holds a conservation easement over the compensation lands, CDFG shall be named a third party beneficiary. USFWS shall be named a third party beneficiary regardless of who holds the easement. The project owner shall also provide a property assessment and warranty. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15]		
C. Enhancement Fund. The project owner shall fund the initial protection and enhancement of the 118.2 acres by providing the enhancement fund to the CDFG. Alternatively, a CPM approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 to manage the compensation lands may hold the enhancement funds. If CDFG takes fee title to the compensation lands, the enhancement fund must go to CDFG. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15]		
D. Endowment Fund: Prior to ground-disturbing project activities, the project owner shall provide to CDFG a capital endowment in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis that will be conducted for the 118.2 acres of compensation lands. Alternatively, a CPM-approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 may hold the endowment fees. If CDFG takes fee title to the compensation lands, the endowment must go to CDFG, where it will likely be held in the special deposit fund established pursuant to Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation will manage the endowment for CDFG and with CDFG guidance. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15] The project owner and the CPM shall ensure that an agreement is in place with the endowment holder/manager to ensure the following: • Interest. Interest generated from the initial capital endowment 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 designed to protect or improve the habitat values of the compensation lands. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15] Withdrawal of Principal. The endowment principal shall not be drawn upon unless such withdrawal is deemed necessary by the CDFG or the approved third-party endowment manager to ensure the continued viability of the species on the 118.2 acres. If CDFG takes fee title to the compensation lands, monies received by CDFG pursuant to this provision will likely be deposited in a special		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
deposit fund established pursuant to Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation will manage the endowment for CDFG and with CDFG guidance. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15] E. *Pooling Endowment Funds*. CDFG, or a CPM-approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 to hold endowments may pool the endowment with other endowments for the operation, management, and protection of the 118.2 acres for local populations of desert tortoise and MGS. However, for reporting purposes, the endowment fund must be tracked and reported individually. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15] F. *Security Deposit*. The project owner may proceed with ground disturbing activities before fully performing its compensatory mitigation duties and obligations as set forth above only if the project owner secures its performance by providing funding to CDFG (Security Deposit), or if CDFG approves, administrative proof of funding, necessary to cover easement costs, fencing/cleanup costs, and as necessary, initial protection and enhancement of the compensation lands. If the Security is provided to allow the commencement of project disturbance prior to completion of compensation actions, the project owner, CDFG, or a third-party entity approved by the CPM, in consultation with CDFG and USFWS, may draw on the principle sum if it is determined that the project owner has failed to comply with the conditions of certification. The security will be returned to the project owner upon completion of the legal transfer of the compensation lands to CDFG or approved third-party entity, or upon completion of an implementation agreement with a third party mitigation banking entity acceptable to the CPM and CDFG, to acquire and/or manage the compensation lands. The Security is calculated as follows: • Costs of enhancing compensation lands are estimated at $250 per acre. • Costs of establishing an endowment for long-term management of compensation lands are estimated at $1,300 per acre. G. *Reimbursement Fund*. The project owner shall provide reimbursement to the CDFG or approved third party for reasonable expenses incurred during title, easement, and documentation review; expenses incurred from other state agency reviews; and overhead related to providing compensation lands. The project owner is responsible for all compensation lands acquisition/easement costs, including but not limited to, title and document review costs, as well as expenses incurred from other state agency reviews and overhead related to providing compensation lands to the department or approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures. The project owner may choose to satisfy its mitigation obligations by paying an in-lieu fee instead of acquiring compensation lands to mitigate for 118.2 acres of habitat, pursuant to California Senate Bill 34 (enacting CESA § 2069 and 2099) or other applicable in-lieu fee provision, to the extent the in-lieu fee provision is found by the Energy Commission to be in compliance with CEQA and CESA requirements. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-15]		
16. Tamarisk Eradication, Monitoring, and Reporting Program BIO-16: The project owner shall ensure effective removal of tamarisk by designing and implementing a monitoring and reporting plan. The plan shall include proposed methods for tamarisk removal and treatment, monitoring and maintenance procedures/timeline, irrigation, success standards and contingency measures, and monitoring and maintenance objectives to prevent the re-invasion of undesirable weeds and/or invasive wildlife species for a minimum of five years. The plan shall include identification on a map of each location and size of non-native vegetation to be removed, and the methods proposed to remove and dispose of invasive wildlife species. Exotic, non-native, and invasive species removal shall be conducted throughout the monitoring and maintenance period. Prior to any tree removal, it will be verified that there are no nesting raptors or other MBTA-protected birds. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-16]	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
For the CPM and CDFG to deem eradication successful: • The site shall not contain more than 5% exotic plant species for the CPM and CDFG to deem the tamarisk removal successful. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-16] • All plant species with rates of dispersal and establishment listed as "High" or "Moderate" on the California Invasive Plant Inventory shall have documented absence, or have been removed from the site for at least three years for the CPM and CDFG to deem the site successful. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-16] • The site shall not contain invasive wildlife species for the CPM and CDFG to deem the site successful. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-16] Monitoring and maintenance of the site shall be conducted for five years unless less monitoring can be justified. Following the first year of monitoring, if the project owner petitions to terminate the monitoring program, staff and CDFG will determine whether more years are of monitoring are needed. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-16]		
17. Monitoring Impacts of Solar Collection Technology on Birds BIO-17: The project owner shall prepare and implement a Bird Monitoring Study to monitor the death and injury of birds from collisions with facility features such as reflective mirror-like surfaces and from heat, and bright light from concentrating sunlight. The study design shall be approved by the CPM in consultation with CDFG and USFWS, and shall be incorporated into the project's BRMIMP and implemented. The Bird Monitoring Study shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The study shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-17]	X-COC	X (except as noted)
18. Common Raven Monitoring, Management, and Control BIO-18: The project owner shall implement the following measures to manage their construction site and related facilities in a manner to control raven populations and to mitigate cumulative and indirect impacts to desert tortoise associated with regional increases in raven numbers [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-18]: 1. *Common Raven Monitoring, Management, and Control Plan*. The project owner shall design and implement a Common Raven Monitoring, Management, and Control Plan that is consistent with the most current USFWS-approved raven management guidelines and that meets the approval of USFWS, CDFG, and Energy Commission staff. The Raven Plan shall numbers: 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. Address monitoring and nest removal during construction and for the life of the project; E. And discuss reporting requirements. 2. *USFWS Regional Raven Management*. The project owner shall submit payment to the project subaccount of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the regional raven management plan. The amount shall be a one-time payment of $105 per acre of land permanently disturbed by the project.	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
19. Evaporation Pond Monitoring and Adaptive Management Plan BIO-19: The project owner shall design and implement an Evaporation Pond Monitoring and Adaptive Management Plan that meets the requirements of the USFWS, CDFG, RWQCB and the CPM. The objective of the Plan is to define the monitoring and reporting procedures as well as triggers for adaptive management strategies that shall be implemented to prevent wildlife mortality at the evaporation ponds. The plan shall include [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19]: • A description of evaporation pond design features such as side slope specifications, freeboard and depth requirements, which will prevent use by wildlife [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19]. • A detailed description of the wildlife monitoring procedures and schedule. For the initial implementation of a new technology, daily monitoring shall be conducted both at the project evaporation ponds and the wetlands within the Harper Lake ACEC. Monitoring may be reduced to weekly and potentially bi-weekly or monthly depending on the results of initial monitoring period [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19]. • A detailed description of the water quality and water level monitoring procedures and schedule. Water quality and water level monitoring shall coincide with wildlife monitoring to provide a basis for comparative analysis [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19]. • A description of wildlife exclusion/deterrent technologies and adaptive management strategies. Technologies shall include but are not limited to netting, and shall not disturb or harass non-target wildlife adjacent to the project area [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19]. • Triggers for adaptive management (i.e., modifications to existing technology or replacement with new technology). Adaptive management shall be necessary if:1)more than one dead bird per quarter is discovered at the evaporation ponds; or 2)one special-status animal is discovered at the evaporation ponds; or 3) noise levels attributable to the technology exceed 60 dBA at the Harper Lake ACEC wetlands. After three failed attempts at new technology, the ponds shall be netted [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19]. • Reporting requirements, to include monthly reporting for the first year if a technology other than netting is used. Reporting may be reduced to monthly or quarterly thereafter if no bird or wildlife deaths are reported during the first year. If wildlife mortality occurs at the ponds or if birds are disturbed at the marsh as described above, the CPM shall be notified within 10 days of the incident and the accompanying adaptive management action to implemented [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19]. • Evaporation pond monitoring and reporting shall continue for the life of the project. The draft Plan submitted by the Applicant (AS 2009d) shall provide the basis for the final plan, subject to review and revisions form the CPM in coordination with USFWS, CDFG, and RWQCB [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-19].	X-COC	X (except as noted)
20. Harper Dry Lake Marsh Water Delivery BIO-20: To ensure continuity of water delivery to the Harper Dry Lake ACEC the project owner shall not decommission the existing well on Mojave Solar, LLC owned property that currently serves the Harper Dry Lake marsh (wetland well) until an alternate well is able to effectively convey a minimum of 75 acre feet per year to the Harper Dry Lake marsh [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-20]. This condition of certification does not transfer to Mojave Solar, LLC the obligation of Luz Solar Partners Ltd. to allow BLM to pump 75 acre feet of water per year to the marsh, under SEGS IX Condition of Certification **BIO-11.k** [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-20].	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
21. USFWS Biological Opinion BIO-21: The project owner shall provide a copy of the Biological Opinion per Section 7 of the federal Endangered Species Act written by the U. S. Fish and Wildlife Service in consultation with U.S. Department of Energy. The terms and conditions contained in the Biological Opinion shall be incorporated into the project's BRMIMP and implemented by the project owner.	X-COC	X (except as noted)
22. Prior to the commencement of ground disturbance activities, clearance surveys will be conducted for MGS burrows along the alignment concurrently with the DT surveys. All burrows within work areas will be excavated. If MGS are detected, they will be allowed to escape the exclusion area prior to completion of fencing of the area. The Designated Biologist will maintain records of squirrels that have been excluded from the work areas, and will prepare a report for submittal to the CDFG 30 day after clearance surveys.	X-COC	X (except as noted)
23. Prior to construction, a California Burrowing Owl Consortium (CBOC), with CDFG approval, protocol level burrowing owl survey will be conducted along the fiber-optic alignments to detect the presence of burrowing owls. Active owl burrows will be mapped and avoided to the maximum extent possible with a minimum 1,250-foot buffer around the active burrow. If the burrow cannot be avoided, the owl will be passively relocated outside of nesting season February 1 through August 31. Relocation of owls will follow the guidelines in the avoidance and minimization measures listed in section 3.8.4.1.2 of this document.	X-COC	X (except as noted)
24. Surveys for sensitive plant species will be conducted during the Spring season and within appropriate habitats prior to commencement of ground disturbance activities. Surveys will be conducted in the Spring prior to construction/ground disturbance. Surveys will follow the rare plant and vegetation survey guidelines provided by CNPS (CNPS 2001a), CDFG (CDFG 2000), and the CEC Recommended Biological Resources Field Survey Guidelines for Large Solar Projects, Draft April 2, 2009 (CEC 2009).	X-COC	X (except as noted)
5. Desert Tortoise avoidance and minimization measures per the Desert Tortoise Clearance and Relocation/Translocation Plan (Desert Tortoise Plan), to be approved by CEC, CDFG, USFWS, and BLM: [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. ***Plant Site Clearance Surveys*** • All tortoise sign will be mapped and evaluated (e.g., type, age, size) during all passes, and all scat collected. During subsequent passes, areas where fresh scat is found will prompt concentrated searches. After the second pass, concentrated searches will be conducted in all areas where recent sign is concentrated, unless a tortoise has been found in that area. No burrows will be collapsed until the third pass, assuming that all tortoises probably have been relocated from the Project Area. (Fresh burrows used by other wildlife, including badgers or foxes, will not be collapsed until occupants have been removed via active or passive techniques approved by CDFG.) While clearance is planned to occur when ambient temperatures are safe for translocating tortoises, ambient temperatures may rise unexpectedly during the second pass such that a tortoise or other wildlife might be trapped in the open if its burrow has been excavated and collapsed during the search effort. To assist the identification of currently used burrows, all burrows will be inspected and assessed for occupation or recent use by tortoises during the first two passes, gated with small sticks along the entrance to detect future use, mapped and flagged. On the third pass, burrows will be completely excavated using standardized techniques approved by USFWS (2009a) and the Desert Tortoise Council (1994). During excavation, attention will be given to potential tortoise nests (see Nest Relocation, below). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Following the installation of exclusionary fencing and after ensuring DT are absent from the Project site, heavy equipment shall be allowed to enter the Project site to perform earthwork such as clearing, grubbing, leveling, and trenching. A biological monitor shall be onsite at all times during initial clearing and grading activities. Should a tortoise be discovered, it shall be relocated as described above in accordance with the final Desert Tortoise Plan. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
Data Collected: • Each captured tortoise will be processed at capture, prior to translocation. The gender, carapace length, width along the widest area between and inclusive of Marginals 5 and 6, height at the third vertebral, distinguishing morphology, clinical signs of disease, capture site location and description, and the amount of void, if any, will be recorded. In addition, the tortoise will be photographed and drawn. All release site locations will also be recorded at relocation/translocation, along with their descriptions. All tortoise handling will be accomplished by techniques outlined in the USFWS *Field Manual* (2009a: Sections 7.6-7.8) and including the most recent disease prevention techniques (e.g., Wendland et al. 2009). Each tortoise will be assigned an individual number, with a number series to be provided by USFWS. Marking techniques will be approved by USFWS, but temporary marks using very small epoxy numbers (e.g., clear epoxy over a small, indelible number on a correction fluid [Wite-Out®] background) on an ostal or interior marginal area that receives little to no abrasion are suggested, with a Project specific identifier. Such numbers will last for several years, which will facilitate identifying specific tortoises if they are subsequently observed during Project maintenance or other activities, including repeated observations during construction (e.g., on the perimeter fence). *Health Considerations:* • Visual health assessments will be conducted on all tortoises relocated (i.e., moved <500 m) or translocated (moved > 500 m), by an experienced biologist approved by the USFWS. • USFWS (2010b) guidance and later e-mails from USFWS (T. Englehard, pers. comm. to A. Karl) have identified that no tortoise will be relocated within 1.5 km (0.9 mi) of a diseased resident tortoise because relocated tortoises may move 1.5 km after translocation. No tortoise may be translocated within 6 km of a diseased resident tortoise. Mojave Solar will comply with the requirement to complete a 100%-coverage survey for resident diseased tortoises within 1.5 km of any tortoise relocated from the MSP site, including during perimeter fence construction, or within 6 km of any tortoise translocated. All resident tortoises within 1.5 km of a relocation site and 6.5 km of a translocation site will be processed (weighed, measured, described, photographed), marked with an epoxy number for future identification and their health assessed. If any tortoises from the Project Area are moved more than 500 m, then all resident tortoises within 6.5 km of the Translocation Site will be fitted with a transmitter for follow-up blood sampling at the earliest date approved by USFWS, currently 15 May. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • No tortoise with clinical signs of mycoplasmosis will be relocated or translocated. Schumacher *et al.* (1997) observed that clinical signs had a high statistical correlation with positive serology (i.e., exposure to *Mycoplasma agassizii*). A mucous nasal discharge is the clinical sign that was the most reliable predictor (93% of tortoises with a mucous nasal discharge were seropositive), although it could be caused by pathogens other than *M. agassizii*. Furthermore, a purulent nasal discharge was the only clinical sign that was relatively objective; other clinical signs were far more subjective, were potentially present for other reasons, and reduced the statistical predictability of positive serology. For the MSP, a purulent nasal discharge will be the threshold to identify a diseased tortoise, unless USFWS determines that other clinical signs should be used for diagnosing a diseased tortoise. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Relocated or translocated desert tortoises determined to be infectious or unhealthy will be sent to the Desert Tortoise Conservation Center (DTCC) or other USFWS-approved facility where they will undergo further assessment, treatment, and/or necropsy. Mojave Solar will provide a flat fee of $9,000 for each desert tortoise sent to the DTCC commensurate with the cost to provide housing, care, treatment, and other services for five years ($3,000 for Year 1, $1,500 for Years 2 to 5). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
Transmitters: • If needed for monitoring relocated or translocated tortoises, transmitters will be affixed to the tortoises. Holohil R1-2B transmitters (24 mm wide by 11 mm thick; 14.9 g; www.holohil.com) will be epoxied onto a carapace scute using five-minute gel epoxy. For males, transmitters will be affixed to the fifth vertebral; for females, transmitters will be affixed to the anterior carapace in the most appropriate location for the animal's shell shape that will preclude interference with righting. The transmitter antenna will be fed through a plastic sheath with a diameter slightly greater than the antenna. This sheath will be epoxied low on the carapace, just above the marginal scutes, and split at the scute seams (growth areas) to preclude distortion of the tortoise's shell during growth. This technique permits the antenna to remain protected from abrasion, but move freely, thereby not affecting tortoise growth. Juvenile tortoises will be similarly equipped but with smaller transmitters, appropriate for their mass and size (<10% of the tortoise's mass). Because the antenna sheath is tightly curved on a very small tortoise, potentially constricting antenna movement with subsequent growth distortion, much more of the antenna will remain free on small tortoises. These are proven techniques to minimize disturbance to the tortoise, refined and/or developed and used by Dr. Karl for more than 20 years and on over 300 tortoises and subsequently used at Fort Irwin for several hundred tortoises. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. *Transportation and Handling:* • Tortoises that only need to be moved a few hundred feet will be hand-carried to the release site. Each tortoise that is hand-carried will be kept upright and the handler, wearing disposable examination gloves (one pair per tortoise), will move the tortoise as quickly and smoothly as possible. Tortoises that must be moved farther from the capture site or temporarily held in a climate-controlled situation will be sequestered in individual, sterilized tubs with taped, sterilized lids or single-use cardboard boxes with lids. During transport by vehicle, the tortoise tub will be kept shaded and the tub will be placed on a well-padded surface that is not over a heated portion of the vehicle floor. These measures are consistent with USFWS guidance (2009a: Section 7.10). • Should a tortoise void or defecate between capture and release, it will be thoroughly rinsed to remove potential attracting odors to predators. Then, it will be placed in a shallow bath of room temperature water to re-hydrate it, per USFWS guidance (2009a: Section 7.9). The tortoise's mass following this procedure will be recorded. *Handling Temperatures:* • Handling will adhere to USFWS (2010b) handling guidelines, which state that tortoises can only be handled when air temperatures, measured at 2 in (5 cm) above the ground (shaded bulb), are not expected to exceed 95°F (35°C) during the handling session. If the air temperature exceeds 95°F during handling or processing, desert tortoises will be kept shaded in an environment where the ambient air temperatures do not exceed 91°F (32.7°C) and air temperature does not exceed 95°F. The desert tortoise will not be released until air temperature at the release site declines to 95°F. • Tortoises must go underground to escape surface heat at ground surface temperatures of 109°F (43°C) (Karl 1992) to 113°F (45°C) (Zimmerman et al., 1994). Because surface temperatures can easily exceed 109°F when air temperatures at two inches are still below 95°F, the more conservative temperature will govern all tortoise handling described in the Desert Tortoise Plan, to minimize harm to tortoises. In other words, the USFWS guidelines will be followed except in the situation where they exceed 109°F ground temperature. ***Relocation/Translocation Procedures*** *Perimeter Fencing:* • Any tortoise that must be moved during perimeter fencing will be relocated immediately outside the construction zone, but onto MSP land. Release points will be as close as possible to the capture point, to keep tortoises within their home range, but will always be on or		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
immediately adjacent to suitable habitat. Specific release points cannot be identified at this time without knowing where tortoises are, but the highest likelihood of finding a tortoise along the perimeter fence is along the southern, eastern and northeastern border of the Beta Site and the western border of the Alpha Site. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Generally, tortoises will be placed in the shade of a shrub or, if known, in the entrance of that tortoise's burrow (but see below in the event that ambient temperatures are high). The most recent USFWS guidance (USFWS 2010b) states that all "perimeter fence" tortoises be moved to the interior of the Project Area. Because the solar project site has limited desert tortoise habitat and is expect to support few if any desert tortoises, which is supported by the limited amount sign and burrows on the proposed solar fields, it is believed that any individual found during fence construction maintains a territory outside of the solar project site and is utilizing the project area for foraging or movement. Therefore, desert tortoises on the MSP project found during fence construction will be placed outside of the solar project site rather than inside. • All tortoises relocated from harm's way during perimeter fencing will be transmittered as described above. The exception will be tortoises brumating (≈hibernating) in burrows during winter (see below for a discussion of handling tortoises outside of USFWS temperature guidelines). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Translocation will occur when air temperatures at 2 in (5 cm) above the ground, are not forecast to exceed 90°F (32°C) within three hours of release and 95°F (35°C) within one week of release; additionally, daily low temperatures should not be cooler than 50°F (10°C). The rationale for the higher temperature constraints is that tortoises must find or dig new refuges in the potentially unfamiliar translocation area prior to the onset of lethal daily temperatures. Along the perimeter fenceline, however, tortoises will be moved only a short distance, within their home ranges, where they are knowledgeable about the locations of refuges. USFWS (2010b) has agreed that relocation on linear facilities, including perimeter fencing, may occur during any time of the year. The only high temperature constraint is that no tortoise will be moved when air temperatures are expected to exceed 90°F (32°C) within three hours of release. Alternatives below summarize conditions and methods detailed in the Desert Tortoise Plan whereby tortoises could be relocated during *periods* of higher temperatures, although no tortoise will be moved when air temperatures exceed 95°F, except in an emergency. • Relocate to known burrow; monitor [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Erect temporary fence between tortoise and construction; monitor; remove fence when appropriate [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Temporarily move construction to another area • Collect and hold in climate controlled facility; release in evening or the following morning; monitor [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. During winter or low temperatures, the following methods summarize the approach to relocating tortoises that must be moved along the perimeter fence: • If cannot be avoided, place tortoise in artificial burrow, temporarily block in and monitor; remove block at two weeks (or earlier depending on the weather) and monitor • If tortoise fails to find suitable winter burrow and will not use artificial burrow, hold in climate controlled facility, in the dark at temperatures simulating burrow temperatures, until seasonal temperatures warm and tortoises are active; release within 100 feet of capture burrow; monitor. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
Plant Site: • Any tortoise that must be moved <500 meters will be relocated immediately outside the construction zone, but onto MSP land, and placed in the shade of a shrub or at the entrance to a known burrow for that tortoise. Release points will be as close as possible to the capture point, to keep tortoises within their home range, but will always be on or immediately adjacent to suitable habitat. Specific release points cannot be identified at this time without knowing where tortoises are, but the highest likelihood of finding a tortoise along the perimeter fence is along the southern, eastern and northeastern border of the Beta Site and the western border of the Alpha Site. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Any tortoise translocated >500 meters will be placed in an individual quarantine pen in the relevant Translocation Site (see below), under a shrub or near an artificial burrow. Two artificial burrows, each at least 4 feet (1.2 m) long, will be constructed for each tortoise, using a gaspowered auger or shovel/plywood, per USFWS (2009a) guidance. Translocated tortoises will only be translocated once. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Based on published and unpublished research, a juvenile tortoise moved farther than 330 feet (100 m) may be outside its recent or familiar use area. For AMSP clearance, if juvenile tortoises are moved within 330 feet of the capture location, where they may have site familiarity, they will be released under a shrub and monitored initially as described in Post-Release Tortoise Monitoring, below. For distances >330 ft, they will be moved to the Translocation Site into a predator-proof enclosure, using 5-ft-tall “Non-Climb”, 2 by 4 inch vertical mesh fencing, buried at least 1 ft. and with avian netting over the top. The size of the enclosure will depend on the number of tortoises found, but will be a minimum of 20 feet in diameter, extending to 50 feet or more, as necessary, to accommodate more juvenile tortoises. (Morafka *et al*. 1997 successfully penned juvenile tortoises at the rate of 62-123 tortoises per acre (152-305 animals per hectare). After tortoises have become familiar with the site’s odors and landmarks for at least two weeks, escape holes will be opened in the lower edge for tortoises to escape passively (e.g., Morafka et al. 1997). Modifications to the design and process may occur in response to predator interest in the enclosure or juvenile tortoise behavior in the enclosure, incorporating new and relevant headstarting techniques used at Twentynine Palms Marine Corps Air Ground Combat Center. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • All translocated tortoises will be rehydrated within 12 hours prior to release, via USFWS (2009a) Methods [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Two translocation sites were chosen, one on each side of Harper Lake Road, to minimize post-translocation movements of tortoises across that road. All tortoises west of Harper Lake Road will be moved to the Translocation Site in Section 25, on land owned by Mojave Solar. All tortoises east of Harper Lake Road will be moved to the Translocation Site in Section 4, in the BLM DWMA and ACEC. Translocation to a DWMA or ACEC is preferred by CDFG, and BLM has agreed to move the few potential tortoises from MSP to BLM land (L. Encinas, pers. comm.). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • The Translocation Site pens will be sufficiently large to support each tortoise pending disease testing results. Each will be a minimum of 165 x 165 feet (50 by 50 m), thereby providing adequate forage and sufficient habitat for a tortoise to find and/or construct adequate cover sites. Pens will be constructed using double-walled, 1 by 2 inch tortoise-proof fencing, installed as identified for perimeter fencing, above. They will be separated by a minimum of 100 meters so that tortoises will not be crowded once the fences are removed (if tortoises are seronegative) and tortoises fully released. Prior to Project Area clearance, pen design and an animal husbandry plan for penned tortoises will be approved by experienced personnel from an accredited American Zoological Association institution and approved by USFWS, BLM, and CDFG. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• If a tortoise is found inside the Plant Site during initial grading or operations, and temperatures are too high for safe relocation/translocation, the tortoise will be captured, secured in an individual, sterilized box and temporarily placed in a quiet, climate-controlled environment (e.g., the onsite Project office). Depending on temperatures and other factors, it is possible that the tortoise could be affixed with a transmitter and relocated outside the Project Area or translocated into the Translocation Site the same day, when temperatures subside (or the following morning for juvenile tortoises), and monitored to ensure its safety. If the tortoise will likely be harmed or die, it will be held in captivity at a location approved by USFWS and CDFG, away from other tortoises, to be released into the Translocation Site during the next available window. Other options will also be investigated. The goal of the translocation is to keep the tortoise in the population, in order to promote recovery. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		
Post-Release Monitoring		
• During perimeter fence construction, tortoises will be moved a short distance from construction activities along the perimeter fence and therefore will be assumed to be within their home range and familiar with burrow locations. However, they will receive immediate post-release monitoring nonetheless. This may be especially critical for juvenile tortoises, which are highly subject to depredation. The Desert Tortoise Plan discusses the details of immediate post-release monitoring for all tortoises relocated during fence		
• USFWS (2010b) requires a five-year monitoring program for translocatees, including tortoises relocated during perimeter fence construction. Based on multiple Project surveys, it is assumed that fewer than five tortoises will be part of the study. USFWS (2010b) has determined that no resident and control study cohorts are required for fewer than five translocatees (including juveniles). If five or more desert tortoises are translocated from the project site, Mojave Solar will work with the BLM, CDFG, and Service to identify appropriate locations for control and resident desert tortoise monitoring. Mojave Solar will monitor all transmittered tortoises for five years from the time of relocation/translocation. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		
• Tortoises will be located by telemetry according to the schedule identified in USFWS (2010b) guidelines. Each time the tortoise is located, the behavior, location (UTM), and burrow description (if any) will be recorded. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		
• Survival and general health will be monitored through body condition indices (mass to volume ratios), clinical signs of disease, serology, and inspection for injuries. Any time a tortoise is handled, it will be examined for clinical signs of disease. Formal health assessments will be conducted during April (following brumation), July (following oviposition), and October (prior to brumation). At these times, body condition (mass to volume ratio) also will be measured (mass, carapace length, width at Marginal 5 or 6, height). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		
• Blood samples will be taken and analyzed annually, in July or October. An approved biologist will conduct the assessments and tissue sampling. While blood samples are not required of tortoises moved <500 meters during relocation, blood will be sampled shortly after relocation3 in order to provide baseline data. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		
• Sampling frequency and techniques for disease analysis will be updated as necessary during the study, based on the newest disease information from this and other studies. This may include tests for other pathogens (e.g. *Mycoplasma.* spp., herpesvirus, iridovirus) as their importance and evaluation techniques become validated for desert tortoises. Data will be recorded on a data sheet similar to that in Appendix 1, with an additional health assessment data sheet to be provided by USFWS. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		
• Any health problems observed (*e.g.*, rapid declines in body condition, perceived outbreaks of disease, mortality events) will be reported to the USFWS, CDFG and BLM such that appropriate actions can be taken in a timely manner. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• Should a transmittered tortoise die, the cause of death will be determined to the extent possible. This information, along with the location and any other analysis that could assist the USFWS, CDFG, BLM and DOE will be provided to these agencies within 48 hours, verbally, or five business days, if by e-mail. All fresh carcasses will be salvaged and frozen. They will be submitted for necropsy upon direction from USFWS, CDFG, and BLM; DOE will also be notified. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. • Transmitters will be changed as necessary. Mojave Solar has also proposed some alternatives for consideration if fewer than five tortoises are relocated/translocated. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. ***Nest Relocation*** • Any nests found between November 1 and April 15 are unlikely to be viable and will not be moved; hatching is typically completed by October. In the event that nests are found between April 15 and October 31, the nests will be moved. Eggs will be inspected to determine if they are viable and, if so, will be moved to an identical microsite (e.g., cover, plant species, soil type, substrate, aspect) on the approved Translocation Site using standard techniques (e.g. Desert Tortoise Council 1994, USFWS 2009a). Translocated nests will be fenced with open-mesh fencing (e.g. 2-inch wide mesh) that will permit hatchlings to escape but prevent depredation by canids that might be attracted to the new nests by human scent predator entry. Open-mesh fencing or avian netting also will be installed on the roof of the nest enclosure to prevent predator entry. Nests will be monitored from a 30-foot distance once a month until late November, at which time they will be excavated for examination. If possible, hatchlings will be weighed, measured, photographed, described and marked. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-25]. Measures specific to the SPS Upgrades: • A qualified biologist will conduct preconstruction clearance surveys for desert tortoises within the limits of the proposed work activity associated with the fiber-optic upgrades. The résumés of the biologists MSLLC and SCE wish to perform these surveys will be provided to USFWS for concurrence prior to conducting the surveys, as part of the process identified in BIO-1 through BIO-4, for the selection of the Designated Biologist and Biological Monitor, if feasible. The limits of proposed work activity will be fenced with temporary desert tortoise fencing, immediately prior to the clearance survey. Clearance surveys will follow the current USFWS desert tortoise survey protocol. • A qualified biologist will conduct preconstruction clearance surveys for desert tortoises within the limits of the proposed work activity associated with the fiber-optic upgrades. The résumés of the biologists MSLLC and SCE wish to perform these surveys will be provided to USFWS for concurrence prior to conducting the surveys, as part of the process identified in BIO-1 through BIO-4, for the selection of the Designated Biologist and Biological Monitor, if feasible. The limits of proposed work activity will be fenced with temporary desert tortoise fencing, immediately prior to the clearance survey. Clearance surveys will follow the current USFWS desert tortoise survey protocol. In addition to the WEAP training required under BIO-5, all personnel involved in the construction, operation, and maintenance of the fiber-optic upgrades will adhere to the following measures: • During construction, all vehicles will remain on existing access and spur roads in potentially occupied desert tortoise habitat. Vehicle speeds in these areas will not exceed 15 miles per hour. Personnel will check under parked vehicles prior to moving the vehicle. If a desert tortoise is found under a vehicle and does not leave on its own, a Designated Biologist or Biological Monitor may be called to relocate the animal out of harm's way, no more than 1,640 feet (500 meters) from its original location.		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• During operations and maintenance activities, all vehicles will remain on existing access and spur roads in potentially occupied desert tortoise habitat. Vehicle speeds in these areas will not exceed 15 miles per hour. Personnel will check under parked vehicles prior to moving the vehicle. If a desert tortoise is found under a vehicle, a Designated Biologist or Biological Monitor will move the desert tortoise as described in the attached Desert Tortoise Plan. • In construction areas in potentially occupied desert tortoise areas, work and staging areas, including the locations of the fiber-optic upgrades under construction, may be fenced with USFWS-approved temporary desert tortoise fencing in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The Designated Biologist or Biological Monitor will assist in determining the boundaries of the area to be fenced in consultation with USFWS and CDFG, and with BLM when construction areas are within lands administered by the BLM. All workers will be advised that equipment and vehicles must remain within the fenced work areas. Installation of the fencing and any necessary surveys will be directed and/or conducted by the Designated Biologist or Biological Monitor in concurrence with these agencies. The fencing will remain in place for the duration of construction activities at a particular location and will be removed when construction activities are complete. The Designated Biologist or Biological Monitor will inspect the fencing on a biweekly basis to ensure that no holes develop that could allow desert tortoises to enter the work areas. If holes are found, they will be repaired immediately. • If desert tortoises are found within an area that has been fenced to exclude them, activities will cease until the Designated Biologist or Biological Monitor moves the desert tortoises out of harm's way outside of the fence, no greater than 1,640 feet (500 meters) away from their original location. At this time, the fencing will be inspected for holes. • If desert tortoises are found in a construction area where fencing was deemed unnecessary, the tortoise will be moved per the Desert Tortoise Plan. • Any desert tortoises found during clearance surveys will be translocated per the Desert Tortoise Plan. Monitoring of active construction outside fenced areas will be continuous. A monitor must be onsite to address any tortoises found inside fenced areas that are not fully graded. • The Designated Biologist or Biological Monitor will follow the handling guidelines at all times if handling desert tortoises is required. • The Designated Biologist or Biological Monitor will have the authority to stop all activities until appropriate corrective measures have been completed. SCE will restrict work to daylight hours, except during an emergency, to avoid nighttime activities when desert tortoises may be present on the access road. Traffic speed will be maintained at 15 miles per hour (24 kilometers per hour) or less in the work area. The temporary ground disturbance associated with the trenching will occur within previously disturbed areas, and will not require rehabilitation or restoration. However, for any construction laydown areas required for the SCE downstream upgrade that will result in soil excavation or surface scouring in nondisturbed areas supporting native vegetation, the following shall be implemented to restore native vegetation: 1. Stockpile Topsoil. To increase chances for revegetation success in temporarily disturbed areas of native vegetation, topsoil shall be stockpiled from the Project work area where temporary disturbances include vegetation removal and soil excavation (e.g., trenching for the installation of fiber-optic cable conduit) for use in revegetation. Native topsoil from the least disturbed locations of temporary excavations, and only areas that are free of noxious weeds, shall be used as a source of topsoil. Topsoil shall be stockpiled from the areas of native vegetation identified for disturbance at a particular site for use in revegetation of temporarily disturbed soils. Two (2) to three (3) inches of soil shall be scraped and stockpiled for use in revegetation of temporarily disturbed areas. Elements related to the collection and stockpiling of topsoil shall be conducted as described on pages 39-40 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003).		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
2. Restore Temporarily Disturbed Areas. Only seed from locally occurring species shall be used for revegetation. Seeds shall contain a mix of short-lived early pioneer species such as native annuals and perennials and subshrubs (for example, cheesebush, matchweed, peppergrass, rabbitbrush, creosote bush, burro-weed, needlegrass, rice grass, and goldenhead). Seeding shall be conducted as described in Chapter 5 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003). A list of plant species suitable for Mojave Desert region revegetation projects, including recommended seed treatments, are included in Appendix A-8 of the same report. The list of native plants observed during surveys of the Project area can also be used as a guide to site-specific plant selection for revegetation. 3. Control Noxious Weeds. Maintain percent cover of noxious weeds (species considered "moderate" or "high" threat to California wildlands as defined by the California Invasive Plant Council [CAL-IPC 2006] and noxious weeds rated "A" or "B" by the California Department of Food and Agriculture [CDFA] and any Federal-rated pest plants [CDFA 2009]) below current levels in rehabilitated areas. 4. Performance Standard. Since all temporary impacts are to be mitigated as permanent, in the form of habitat replacement at set ratios, no performance standard shall be put in place on the success of the restoration of these areas. Implementation of the measures outlined in BIO-12, and the documentation of the restoration activities by the Designated Biologist shall be sufficient for adherence to this measure. 5. Reporting. The Designated Biologist shall record the following information for any restoration activity: a) the locations (narrative and maps) and dates of habitat restoration; b) extent of surface area disturbed and restored; c) type and source of native seed mix used; d) general description of the pre-disturbance site (plant species diversity, presence of invasive plant species, etc.); and e) a general description of the areas immediately surrounding the restoration site (plant species diversity, presence of invasive plant species, habitat quality, level of disturbance, etc.).		
26. Prior to the commencement of ground disturbance activities, clearance surveys will be conducted for MGS burrows along the alignment concurrently with the DT surveys. All burrows within work areas will be excavated. If MGS are detected, they will be allowed to escape the exclusion area prior to completion of fencing of the area. The Designated Biologist will maintain records of squirrels that have been excluded from the work areas, and will prepare a report for submittal to the CDFG 30 day after clearance surveys.	X-COC	X (except as noted)
27. Prior to construction, a California Burrowing Owl Consortium (CBOC), with CDFG approval, protocol level burrowing owl survey will be conducted along the fiber-optic alignments to detect the presence of burrowing owls. Active owl burrows will be mapped and avoided to the maximum extent possible with a minimum 1,250-foot buffer around the active burrow. If the burrow cannot be avoided, the owl will be passively relocated outside of nesting season February 1 through August 31. Relocation of owls will follow the guidelines in the avoidance and minimization measures listed in section 3.8.4.1.2 of this document.	X-COC	X (except as noted)
28. If construction activities occur during avian nesting season (February 1 through August 1), two surveys separated by a 10-day interval will be conducted to detect potential active avian nests by a qualified biologist familiar with locating nests. If active nests are found, CDFG will be consulted to establish a no disturbance buffer, until the nest is no longer active as determined by a qualified biologist. This will be accomplished by monitoring the nest with a non-invasive method such as observing the nest with a spotting scope.	X-COC	X (except as noted)
29. Surveys for sensitive plant species will be conducted during the Spring season and within appropriate habitats prior to commencement of ground disturbance activities. Surveys will be conducted in the Spring prior to construction/ground disturbance. Surveys will follow the rare plant and vegetation survey guidelines provided by CNPS (CNPS 2001a), CDFG (CDFG 2000), and the CEC Recommended Biological Resources Field Survey Guidelines for Large Solar Projects, Draft April 2, 2009 (CEC 2009).	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
30. General minimization include the following Pursuant to BIO-7: • *Limit Disturbance Area*. The boundaries of all areas to be temporarily or permanently disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the Designated Biologist. Spoils shall be stockpiled in disturbed areas, 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, vehicles, and equipment shall be confined to the flagged areas. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-30]. • *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 will do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads (e.g., new spur roads) or the construction zone, the route will be clearly marked (i.e., flagged and/or staked) prior to the onset of construction. • *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 on Harper Lake Road and within fenced areas that have been cleared of tortoises and other wildlife. The speed limit shall not exceed 15 miles per hour within unfenced areas and secondary unpaved access roads. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-30]. • *Monitor During Construction*. 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 USFWS-approved Designated Biologist or Biological Monitor shall closely monitor vegetation removal and grading activities to prevent wildlife injury or mortality. • *Minimize Impacts of Transmission/Pipeline Alignments, Roads, 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. Temporary disturbance areas, if necessary, shall occur within the project site and shall be designed, installed, and maintained with the goal of minimizing disturbance. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) *Suggested Practices for Avian Protection on Power Lines* (APLIC 2006) and *Mitigating Bird Collisions with Power Lines* (APLIC 2004) to reduce the likelihood of bird electrocutions and collisions. • *Avoid Use of Toxic Substances*. Road surfacing and sealants as well as soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-30]. • *Minimize Lighting Impacts*. Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards the project boundaries and the Harper Dry Lake marsh. Lighting shall be shielded, directional, and at the lowest intensity required for activity. • *Avoid Vehicle Impacts to Desert Tortoise*. Parking and storage shall occur within 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. During construction, a Biological Monitor shall drive along project access roads, particularly Harper Lake Road at least every three hours during the desert tortoise active period (April through May and September through October) looking for desert tortoise or other vulnerable wildlife within the roadway. Outside of the active period, roads shall be monitored at least twice a day in advance of peak AM and PM traffic periods. During operation, employees shall report any desert tortoise sightings along roadways to the Biological Monitor. If a desert tortoise is observed in the roadway or beneath a parked vehicle, it will be left to move on its own or a Biological Monitor may remove and transfer the animal to a safe location if temperatures are within the appropriate range as identified in the Final Desert Tortoise Clearing and Translocation Plan.		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• *Avoid Wildlife Pitfalls*. At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the permanently fenced area 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 tortoise-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with desert tortoise exclusion fencing shall be inspected at the beginning of each workday, periodically throughout, and at the end of each workday by the Designated Biologist or a Biological Monitor. Should a tortoise or other wildlife become trapped, the Designated Biologist or Biological Monitor shall remove and relocate the individual to a safe location. Any wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.	X-COC	X (except as noted)
• *Avoid Entrapment of Wildlife*. Any construction pipe, culvert, or similar structure with a diameter greater than three inches, stored less than eight inches above ground for one or more days/nights, shall be inspected for wildlife before the material is moved, buried, or capped. As an alternative, all such structures may be capped before being stored, or placed on pipe racks. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-30].		
• *Report Wildlife Injury and Mortality*. All inadvertent deaths of sensitive species, including road kill, shall be reported to the appropriate project representative. Species name, physical characteristics of the animal (sex, age class, length, weight), and other pertinent information shall be noted and reported in the Monthly Compliance Reports. Injured animals shall be reported to CDFG or USFWS and the CPM and the project owner shall follow instructions that are provided by CDFG or USFWS. If CDFG or USFWS cannot be immediately reached, consideration should be given to taking the animal to a veterinary hospital. If any golden eagles are recovered dead, they shall be sent to the National Eagle Repository after cause of death has been investigated.		
• *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, common ravens, and other wildlife to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and attract desert tortoise, common ravens, and other wildlife to the site and shall take appropriate action to reduce water application where necessary. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-30].		
• *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 cleaned up immediately 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.		
• *Worker Guidelines*. During construction all trash and food-related waste shall be placed in selfclosing 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. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-30].		
• *Avoid Spread of Noxious Weeds*. The project owner shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds: **~~[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-30]~~**.		
a. Limit the size of any vegetation and/or ground disturbance to the absolute minimum and limit ingress and egress to defined routes;		
b. Reestablish vegetation **~~quickly~~** on disturbed sites **and** temporarily disturbed areas, including pipelines, transmission lines, and staging areas **in an ecologically time-sensitive manner based on environmental conditions, with the understanding that any analysis of the potential introduction of invasive plants from work on a linear project would need to a) be done based on the practical limitations of linear, noncontiguous work, and b) account for adjacent environmental conditions (i.e., distinguish between existing invasive populations in the area and any potential introduction attributable to the linear project work)** (see BIO-9);		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
c. Prevent spread of non-native plants via vehicular sources by implementing TrackcleanTM or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment and construction vehicles shall be cleaned within an approved area or commercial facility prior to transport to the construction site. The number of cleaning stations shall be limited and weed control/herbicide application shall be used at the cleaning station(s); d. Use only weed-free straw, hay bales, and seed for erosion control and sediment barrier installations; e. Invasive non-native species shall not be used in landscaping plans and erosion control; and f. Monitor and rapidly implement control measures to ensure early detection and eradication of weed invasions. • *Implement Erosion Control Measures*. Standard erosion control measures shall be implemented X2 for all phases of construction and operation. 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) with slopes toward an ephemeral drainage or Harper Dry Lake shall be stabilized to reduce erosion potential. • *Monitor Ground Disturbing Activities Prior to Site Mobilization*. If ground disturbing activities are required prior to site mobilization, 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. Actions not included in the project description are prohibited.		
31. Desert Tortoise avoidance and minimization measures: A Desert Tortoise Clearance and Relocation/Translocation Plan (Desert Tortoise Plan) will be approved by CEC, CDFG, USFWS, and BLM. ***Perimeter Fencing*** • Prior to ground disturbance and tortoise clearance of the plant site, the entire site shall be fenced with DT exclusion fence. To avoid impacts to DT during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. Surveys shall be conducted by the Designated Biologist using techniques approved by USFWS and CDFG. Biological monitors may assist the Designated Biologist under his or her supervision. These surveys shall provide 100% coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. This fence line transect shall cover an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 15 feet apart. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Burrows and tortoises will be avoided if at all possible (especially for temporary fencing). But, if a burrow must be destroyed for fencing to occur, then it will be visually and tactilely examined for occupancy by tortoises and other wildlife. If occupancy is negative or cannot be established, the burrow will be carefully excavated with hand tools, using standardized techniques approved by USFWS (2009a) and the Desert Tortoise Council (1994). No burrows that can be avoided will be collapsed during perimeter fence construction. • The fence installation shall be supervised by the Designated Biologist and monitored by the biological monitors to ensure the safety of any tortoise present. The level of monitoring will depend on the specific fencing activity, but at least one biological monitor will accompany each separate construction team, such that no driving, trenching, fence pulling, or any surface disturbing activities will occur without the immediate presence of a biological monitor. Maps of burrows from the pre-construction survey will be provided to all biological monitors to assist in protecting tortoises. Such maps will also be potentially useful for relocating tortoises. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Tortoises will be avoided if at all possible. Any tortoise that must be moved will be relocated as detailed in the Desert Tortoise Relocation/Translocation section, below.	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• The permanent tortoise exclusionary fencing shall consist of galvanized hard wire cloth, 1-by-2- inch mesh sunk 12 inches into the ground, and at least 24 inches above ground, with t-stakes or other solid, permanent poles placed at 8 to 10-foot intervals (refer to parameters for USFWS approved tortoise exclusion fencing at www.fws.gov/ventura/ species info/protocols_guidelines). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Temporary fencing may be used to exclude tortoises until the permanent fence is installed. Temporary fencing will follow guidelines and materials for permanent fencing except in very temporary situations, when silt fencing may be used. In both cases, supporting stakes will be sufficiently spaced (e.g., ≤8 feet for wire mesh; ≤5 feet for silt fencing) to maintain fence integrity. Fencing may be buried if it will not create a biologically significant disturbance, or bent outward at or below the ground level, with the bent portion tacked and/or held down by rocks and soil. This method eliminates the need for trenching, which, for short-term temporary impacts, may be more beneficial to the recovery of the landscape, and thus the species. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates shall remain closed except during vehicle passage and may be electronically activated to open and close immediately after vehicle(s) have entered or exited to prevent extended periods with open gates, which might lead to a tortoise entering. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • The onsite storm water drainage channels, including the headwalls, outlet, and road crossings, shall be permanently fenced to ensure exclusion of DT during plant operation. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Following installation of the DT exclusion fencing for the permanent site, storm water drainage fencing, and temporary fencing (if required), the fencing shall be regularly inspected. Permanent fencing shall be inspected monthly and during/immediately following all rainfall events where soil and water flow through washes or overland and could damage the fence or erode the soil underneath. Any damage to the fencing will be repaired immediately. If it cannot be repaired immediately, any gaps that are open to tortoise habitat will be continuously monitored until the gap can be repaired to ensure that a tortoise has not entered the site through the gap. Temporary fencing will be inspected at least weekly if construction is occurring; if there is a delay in construction, temporary fence inspections will follow the same schedule as for permanent fencing. All gaps in 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 enclosed by the fence for tortoises. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Following the onset of the tortoise activity season, or if exclusion fencing is installed when tortoises are known to be active (for example, if unusually warm weather occurs in winter before fencing is completed), then all installed exclusion fence (partial or complete) will be checked ensure that no tortoise is trapped inside the fenced area. If fencing is installed during a warm period in winter, then all fencing will be checked twice daily, during the warmer periods of the day. Any tortoise will be relocated as described for fence construction. If fencing occurs during spring or summer (approximately 1 April through September), then all fencing will be checked 2-3 times daily during tortoise activity temperatures (between approximately 15 and 42°C ground surface temperature), for two weeks, to ensure that a tortoise is not inadvertently trapped inside. Tortoises will be passively or actively relocated as identified for fence construction. If, for any reason, tortoise clearance surveys were delayed for several months after fencing, at least one clearance pass will be completed as soon as tortoises became active following the completion of fencing (e.g., April if fencing were completed in winter, immediately after fencing if fencing were completed from April through October). These measures will ensure that no tortoise are trapped into the non-habitat inside the site following fencing. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
Plant Site Clearance Surveys		
• Following construction of the tortoise exclusionary fencing around the plant site (permanent or temporary), the plant site shall be cleared of tortoises by the Designated Biologist, who may be assisted by biological monitors. Clearance surveys must coincide with heightened DT activity from April through May and late September through October. Non-protocol clearance surveys may be conducted in areas of certain unsuitable habitat (e.g., developed) with prior approval of specific areas by USFWS and CDFG. Per USFWS (2010b) guidelines, a minimum of three, 100% coverage clearance passes will be completed. For the Project Area to be deemed cleared of tortoises, no additional tortoises may be found on the two, final, consecutive clearance passes. If a tortoise is found on one of these passes, two clean passes (i.e., no new tortoises) must follow before the Project Area can be declared to be cleared of tortoises. In this event, and because of the broad fields of non-habitat, it will not be necessary to complete another clearance of the entire Project Area, but instead only that portion of the site where the tortoise was found. Clearance transects generally will be 15 feet [G1]wide. Transects narrower than 15 feet wide will be used if dictated by dense shrub vegetation or where visibility is otherwise compromised. Wider transects during the second and third passes may be requested of USFWS on the shrub-less crop fields, depending on the height and nature of the vegetation there and the results of the first clearance pass. On each subsequent pass, an attempt will be made to view all shrubs and the terrain from as many angles as possible. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31].		
• Following the installation of exclusionary fencing and after ensuring DT are absent from the Project site, heavy equipment shall be allowed to enter the Project site to perform earthwork such as clearing, grubbing, leveling, and trenching. A biological monitor shall be onsite at all times during initial clearing and grading activities. Should a tortoise be discovered, it shall be relocated as described above in accordance with the final Desert Tortoise Plan. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31].		
Data Collected:		
• Each captured tortoise will be processed at capture, prior to translocation. The gender, carapace length, width along the widest area between and inclusive of Marginals 5 and 6, height at the third vertebral, distinguishing morphology, clinical signs of disease, capture site location and description, and the amount of void, if any, will be recorded. In addition, the tortoise will be photographed and drawn. All release site locations will also be recorded at relocation/translocation, along with their descriptions. All tortoise handling will be accomplished by techniques outlined in the USFWS *Field Manual* (2009a: Sections 7.6-7.8) and including the most recent disease prevention techniques (e.g., Wendland et al. 2009). Each tortoise will be assigned an individual number, with a number series to be provided by USFWS. Marking techniques will be approved by USFWS, but temporary marks using very small epoxy numbers (e.g., clear epoxy over a small, indelible number on a correction fluid [Wite-Out®] background) on an ostal or interior marginal area that receives little to no abrasion are suggested, with a Project specific identifier. Such numbers will last for several years, which will facilitate identifying specific tortoises if they are subsequently observed during Project maintenance or other activities, including repeated observations during construction (e.g., on the perimeter fence).		
Health Considerations:		
• Visual health assessments will be conducted on all tortoises relocated (i.e., moved <500 m) or translocated (moved > 500 m), by an experienced biologist approved by the USFWS.		
• USFWS (2010b) guidance and later e-mails from USFWS (T. Englehard, pers. comm. to A. Karl) have identified that no tortoise will be relocated within 1.5 km (0.9 mi) of a diseased resident tortoise because relocated tortoises may move 1.5 km after translocation. No tortoise may be translocated within 6 km of a diseased resident tortoise. Mojave Solar will comply with the requirement to complete a 100%-coverage survey for resident diseased tortoises within 1.5 km of any tortoise relocated from the MSP site, including during perimeter fence construction, or within 6 km of any tortoise translocated. All resident tortoises within 1.5 km of a relocation site and		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
6.5 km of a translocation site will be processed (weighed, measured, described, photographed), marked with an epoxy number for future identification and their health assessed. If any tortoises from the Project Area are moved more than 500 m, then all resident tortoises within 6.5 km of the Translocation Site will be fitted with a transmitter for follow-up blood sampling at the earliest date approved by USFWS, currently 15 May. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • No tortoise with clinical signs of mycoplasmosis will be relocated or translocated. Schumacher *et al.* (1997) observed that clinical signs had a high statistical correlation with positive serology (i.e., exposure to *Mycoplasma agassizii*). A mucous nasal discharge is the clinical sign that was the most reliable predictor (93% of tortoises with a mucous nasal discharge were seropositive), although it could be caused by pathogens other than *M. agassizii*. Furthermore, a purulent nasal discharge was the only clinical sign that was relatively objective; other clinical signs were far more subjective, were potentially present for other reasons, and reduced the statistical predictability of positive serology. For the MSP, a purulent nasal discharge will be the threshold to identify a diseased tortoise, unless USFWS determines that other clinical signs should be used for diagnosing a diseased tortoise. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Relocated or translocated desert tortoises determined to be infectious or unhealthy will be sent to the Desert Tortoise Conservation Center (DTCC) or other USFWS-approved facility where they will undergo further assessment, treatment, and/or necropsy. Mojave Solar will provide a flat fee of $9,000 for each desert tortoise sent to the DTCC commensurate with the cost to provide housing, care, treatment, and other services for five years ($3,000 for Year 1, $1,500 for Years 2 to 5). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. *Transmitters:* • If needed for monitoring relocated or translocated tortoises, transmitters will be affixed to the tortoises. Holohil R1-2B transmitters (24 mm wide by 11 mm thick; 14.9 g; www.holohil.com) will be epoxied onto a carapace scute using five-minute gel epoxy. For males, transmitters will be affixed to the fifth vertebral; for females, transmitters will be affixed to the anterior carapace in the most appropriate location for the animal's shell shape that will preclude interference with righting. The transmitter antenna will be fed through a plastic sheath with a diameter slightly greater than the antenna. This sheath will be epoxied low on the carapace, just above the marginal scutes, and split at the scute seams (growth areas) to preclude distortion of the tortoise's shell during growth. This technique permits the antenna to remain protected from abrasion, but move freely, thereby not affecting tortoise growth. Juvenile tortoises will be similarly equipped but with smaller transmitters, appropriate for their mass and size (<10% of the tortoise's mass). Because the antenna sheath is tightly curved on a very small tortoise, potentially constricting antenna movement with subsequent growth distortion, much more of the antenna will remain free on small tortoises. These are proven techniques to minimize disturbance to the tortoise, refined and/or developed and used by Dr. Karl for more than 20 years [G2]and on over 300 tortoises and subsequently used at Fort Irwin for several hundred tortoises. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. *Transportation and Handling:* • Tortoises that only need to be moved a few hundred feet will be hand-carried to the release site. Each tortoise that is hand-carried will be kept upright and the handler, wearing disposable examination gloves (one pair per tortoise), will move the tortoise as quickly and smoothly as possible. Tortoises that must be moved farther from the capture site or temporarily held in a climate-controlled situation will be sequestered in individual, sterilized tubs with taped, sterilized lids or single-use cardboard boxes with lids. During transport by vehicle, the tortoise tub will be kept shaded and the tub will be placed on a well-padded surface that is not over a heated portion of the vehicle floor. These measures are consistent with USFWS guidance (2009a: Section 7.10).		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• Should a tortoise void or defecate between capture and release, it will be thoroughly rinsed to remove potential attracting odors to predators. Then, it will be placed in a shallow bath of room temperature water to re-hydrate it, per USFWS guidance (2009a: Section 7.9). The tortoise's mass following this procedure will be recorded. *Handling Temperatures:* • Handling will adhere to USFWS (2010b) handling guidelines, which state that tortoises can only be handled when air temperatures, measured at 2 in (5 cm) above the ground (shaded bulb), are not expected to exceed 95°F (35°C) during the handling session. If the air temperature exceeds 95°F during handling or processing, desert tortoises will be kept shaded in an environment where the ambient air temperatures do not exceed 91°F (32.7 °C) and air temperature does not exceed 95°F. The desert tortoise will not be released until air temperature at the release site declines to 95°F. • Tortoises must go underground to escape surface heat at ground surface temperatures of 109°F (43°C) (Karl 1992) to 113°F (45°C) (Zimmerman et al., 1994). Because surface temperatures can easily exceed 109°F when air temperatures at two inches are still below 95°F, the more conservative temperature will govern all tortoise handling described in the Desert Tortoise Plan, to minimize harm to tortoises. In other words, the USFWS guidelines will be followed except in the situation where they exceed 109°F ground temperature. ***Relocation/Translocation Procedures*** *Perimeter Fencing:* • Any tortoise that must be moved during perimeter fencing will be relocated immediately outside the construction zone, but onto MSP land. Release points will be as close as possible to the capture point, to keep tortoises within their home range, but will always be on or immediately adjacent to suitable habitat. Specific release points cannot be identified at this time without knowing where tortoises are, but the highest likelihood of finding a tortoise along the perimeter fence is along the southern, eastern and northeastern border of the Beta Site and the western border of the Alpha Site. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Generally, tortoises will be placed in the shade of a shrub or, if known, in the entrance of that tortoise's burrow (but see below in the event that ambient temperatures are high). The most recent USFWS guidance (USFWS 2010b) states that all "perimeter fence" tortoises be moved to the interior of the Project Area. Because the solar project site has limited desert tortoise habitat and is expect to support few if any desert tortoises, which is supported by the limited amount sign and burrows on the proposed solar fields, it is believed that any individual found during fence construction maintains a territory outside of the solar project site and is utilizing the project area for foraging or movement. Therefore, desert tortoises on the MSP project found during fence construction will be placed outside of the solar project site rather than inside. • All tortoises relocated from harm's way during perimeter fencing will be transmittered as described above. The exception will be tortoises brumating (≈hibernating) in burrows during winter (see below for a discussion of handling tortoises outside of USFWS temperature guidelines). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Translocation will occur when air temperatures at 2 in (5 cm) above the ground, are not forecast to exceed 90°F (32°C) within three hours of release and 95°F (35°C) within one week of release; additionally, daily low temperatures should not be cooler than 50°F (10°C). The rationale for the higher temperature constraints is that tortoises must find or dig new refuges in the potentially unfamiliar translocation area prior to the onset of lethal daily temperatures. Along the perimeter fenceline, however, tortoises will be moved only a short distance, within their home ranges, where they are knowledgeable about the locations of refuges. USFWS (2010b) has agreed that relocation on linear facilities, including perimeter fencing, may occur during any time of the year. The only high temperature constraint is that no tortoise will be moved when air temperatures are expected to exceed 90°F (32°C) within three hours of release. Alternatives		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
below summarize conditions and methods detailed in the Desert Tortoise Plan whereby tortoises could be relocated during *periods* of higher temperatures, although no tortoise will be moved when air temperatures exceed 95°F, except in an emergency. • Relocate to known burrow; monitor [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Erect temporary fence between tortoise and construction; monitor; remove fence when appropriate [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Temporarily move construction to another area [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Collect and hold in climate controlled facility; release in evening or the following morning; monitor [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. During winter or low temperatures, the following methods summarize the approach to relocating tortoises that must be moved along the perimeter fence: • If cannot be avoided, place tortoise in artificial burrow, temporarily block in and monitor; remove block at two weeks (or earlier depending on the weather) and monitor [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • If tortoise fails to find suitable winter burrow and will not use artificial burrow, hold in climate controlled facility, in the dark at temperatures simulating burrow temperatures, until seasonal temperatures warm and tortoises are active; release within 100 feet of capture burrow; monitor. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. *Plant Site:* • Any tortoise that must be moved <500 meters will be relocated immediately outside the construction zone, but onto MSP land, and placed in the shade of a shrub or at the entrance to a known burrow for that tortoise. Release points will be as close as possible to the capture point, to keep tortoises within their home range, but will always be on or immediately adjacent to suitable habitat. Specific release points cannot be identified at this time without knowing where tortoises are, but the highest likelihood of finding a tortoise along the perimeter fence is along the southern, eastern and northeastern border of the Beta Site and the western border of the Alpha Site. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Any tortoise translocated >500 meters will be placed in an individual quarantine pen in the relevant Translocation Site (see below), under a shrub or near an artificial burrow. Two artificial burrows, each at least 4 feet (1.2 m) long, will be constructed for each tortoise, using a gaspowered auger or shovel/plywood, per USFWS (2009a) guidance. Translocated tortoises will only be translocated once. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Based on published and unpublished research, a juvenile tortoise moved farther than 330 feet (100 m) may be outside its recent or familiar use area. For AMSP clearance, if juvenile tortoises are moved within 330 feet of the capture location, where they may have site familiarity, they will be released under a shrub and monitored initially as described in Post-Release Tortoise Monitoring, below. For distances >330 ft, they will be moved to the Translocation Site into a predator-proof enclosure, using 5-ft-tall “Non-Climb”, 2 by 4 inch vertical mesh fencing, buried at number of tortoises found, but will be a minimum of 20 feet in diameter, extending to 50 feet or more, as necessary, to accommodate more juvenile tortoises. (Morafka *et al*. 1997 successfully penned juvenile tortoises at the rate of 62-123 tortoises per acre (152-305 animals per hectare). After tortoises have become familiar with the site’s odors and landmarks for at least two weeks, escape holes will be opened in the lower edge for tortoises to escape passively (e.g., Morafka et al. 1997). Modifications to the design and process may occur in response to predator interest in the enclosure or juvenile tortoise behavior in the enclosure,		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
incorporating new and relevant headstarting techniques used at Twentynine Palms Marine Corps Air Ground Combat Center. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • All translocated tortoises will be rehydrated within 12 hours prior to release, via USFWS (2009a) Methods [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Two translocation sites were chosen, one on each side of Harper Lake Road, to minimize post-translocation movements of tortoises across that road. All tortoises west of Harper Lake Road will be moved to the Translocation Site in Section 25, on land owned by Mojave Solar. All tortoises east of Harper Lake Road will be moved to the Translocation Site in Section 4, in the BLM DWMA and ACEC. Translocation to a DWMA or ACEC is preferred by CDFG, and BLM has agreed to move the few potential tortoises from MSP to BLM land (L. Encinas, pers. comm.). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • The Translocation Site pens will be sufficiently large to support each tortoise pending disease testing results. Each will be a minimum of 165 x 165 feet (50 by 50 m), thereby providing adequate forage and sufficient habitat for a tortoise to find and/or construct adequate cover sites. Pens will be constructed using double-walled, 1 by 2 inch tortoise-proof fencing, installed as identified for perimeter fencing, above. They will be separated by a minimum of 100 meters so that tortoises will not be crowded once the fences are removed (if tortoises are seronegative) and tortoises fully released. Prior to Project Area clearance, pen design and an animal husbandry plan for penned tortoises will be approved by experienced personnel from an accredited American Zoological Association institution and approved by USFWS, BLM, and CDFG. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • If a tortoise is found inside the Plant Site during initial grading or operations, and temperatures are too high for safe relocation/translocation, the tortoise will be captured, secured in an individual, sterilized box and temporarily placed in a quiet, climate-controlled environment (e.g., the onsite Project office). Depending on temperatures and other factors, it is possible that the tortoise could be affixed with a transmitter and relocated outside the Project Area or translocated into the Translocation Site the same day, when temperatures subside (or the following morning for juvenile tortoises), and monitored to ensure its safety. If the tortoise will likely be harmed or die, it will be held in captivity at a location approved by USFWS and CDFG, away from other tortoises, to be released into the Translocation Site during the next available window. Other options will also be investigated. The goal of the translocation is to keep the tortoise in the population, in order to promote recovery. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. ***Post- Release Monitoring*** • During perimeter fence construction, tortoises will be moved a short distance from construction activities along the perimeter fence and therefore will be assumed to be within their home range and familiar with burrow locations. However, they will receive immediate post-release monitoring nonetheless. This may be especially critical for juvenile tortoises, which are highly subject to depredation. The Desert Tortoise Plan discusses the details of immediate post-release monitoring for all tortoises relocated during fence • USFWS (2010b) requires a five-year monitoring program for translocatees, including tortoises relocated during perimeter fence construction. Based on multiple Project surveys, it is assumed that fewer than five tortoises will be part of the study. USFWS (2010b) has determined that no resident and control study cohorts are required for fewer than five translocatees (including juveniles). If five or more desert tortoises are translocated from the project site, Mojave Solar will work with the BLM, CDFG, and Service to identify appropriate locations for control and resident desert tortoise monitoring. Mojave Solar will monitor all transmittered tortoises for five years from the time of relocation/translocation. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Tortoises will be located by telemetry according to the schedule identified in USFWS (2010b) guidelines. Each time the tortoise is located, the behavior, location (UTM), and burrow description (if any) will be recorded. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• Survival and general health will be monitored through body condition indices (mass to volume ratios), clinical signs of disease, serology, and inspection for injuries. Any time a tortoise is handled, it will be examined for clinical signs of disease. Formal health assessments will be conducted during April (following brumation), July (following oviposition), and October (prior to brumation). At these times, body condition (mass to volume ratio) also will be measured (mass, carapace length, width at Marginal 5 or 6, height) [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Blood samples will be taken and analyzed annually, in July or October. An approved biologist will conduct the assessments and tissue sampling. While blood samples are not required of tortoises moved <500 meters during relocation, blood will be sampled shortly after relocation3 in order to provide baseline data. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Sampling frequency and techniques for disease analysis will be updated as necessary during the study, based on the newest disease information from this and other studies. This may include tests for other pathogens (e.g. *Mycoplasma.* spp., herpesvirus, iridovirus) as their importance and evaluation techniques become validated for desert tortoises. Data will be recorded on a data sheet similar to that in Appendix 1, with an additional health assessment data sheet to be provided by USFWS. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Any health problems observed (*e.g.*, rapid declines in body condition, perceived outbreaks of disease, mortality events) will be reported to the USFWS, CDFG and BLM such that appropriate actions can be taken in a timely manner. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Should a transmittered tortoise die, the cause of death will be determined to the extent possible. This information, along with the location and any other analysis that could assist the USFWS, CDFG, BLM and DOE will be provided to these agencies within 48 hours, verbally, or five business days, if by e-mail. All fresh carcasses will be salvaged and frozen. They will be submitted for necropsy upon direction from USFWS, CDFG, and BLM; DOE will also be notified. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Transmitters will be changed as necessary. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. Mojave Solar has also proposed some alternatives for consideration if fewer than five tortoises are relocated/translocated. ***Nest Relocation*** • Any nests found between November 1 and April 15 are unlikely to be viable and will not be moved; hatching is typically completed by October. In the event that nests are found between April 15 and October 31, the nests will be moved. Eggs will be inspected to determine if they are viable and, if so, will be moved to an identical microsite (e.g., cover, plant species, soil type, substrate, aspect) on the approved Translocation Site using standard techniques (e.g. Desert Tortoise Council 1994, USFWS 2009a). Translocated nests will be fenced with open-mesh fencing (e.g. 2-inch wide mesh) that will permit hatchlings to escape but prevent depredation by canids that might be attracted to the new nests by human scent predator entry. Open-mesh fencing or avian netting also will be installed on the roof of the nest enclosure to prevent predator entry. Nests will be monitored from a 30-foot distance once a month until late November, at which time they will be excavated for examination. If possible, hatchlings will be weighed, measured, photographed, described and marked. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. Measures specific to the SPS Upgrades: A qualified biologist will conduct preconstruction clearance surveys for desert tortoises within the limits of the proposed work activity associated with the fiber-optic upgrades. The résumés of the biologists MSLLC and SCE wish to perform these surveys will be provided to USFWS for concurrence prior to conducting the surveys, as part of the process identified in BIO-1 through BIO-4, for the selection of the Designated Biologist and Biological Monitor, if feasible. The limits of proposed work activity will be fenced with		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
temporary desert tortoise fencing, immediately prior to the clearance survey. Clearance surveys will follow the current USFWS desert tortoise survey protocol. In addition to the WEAP training required under BIO-5, all personnel involved in the construction, operation, and maintenance of the fiber-optic upgrades will adhere to the following measures[SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]: • During construction, all vehicles will remain on existing access and spur roads in potentially occupied desert tortoise habitat. Vehicle speeds in these areas will not exceed 15 miles per hour. Personnel will check under parked vehicles prior to moving the vehicle. If a desert tortoise is found under a vehicle and does not leave on its own, a Designated Biologist or Biological Monitor may be called to relocate the animal out of harm's way, no more than 1,640 feet (500 meters) from its original location. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • During operations and maintenance activities, all vehicles will remain on existing access and spur roads in potentially occupied desert tortoise habitat. Vehicle speeds in these areas will not exceed 15 miles per hour. Personnel will check under parked vehicles prior to moving the vehicle. If a desert tortoise is found under a vehicle, a Designated Biologist or Biological Monitor will move the desert tortoise as described in the attached Desert Tortoise Plan. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • In construction areas in potentially occupied desert tortoise areas, work and staging areas, including the locations of the fiber-optic upgrades under construction, may be fenced with USFWS-approved temporary desert tortoise fencing in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The Designated Biologist or Biological Monitor will assist in determining the boundaries of the area to be fenced in consultation with USFWS and CDFG, and with BLM when construction areas are within lands administered by the BLM. All workers will be advised that equipment and vehicles must remain within the fenced work areas. Installation of the fencing and any necessary surveys will be directed and/or conducted by the Designated Biologist or Biological Monitor in concurrence with these agencies. The fencing will remain in place for the duration of construction activities at a particular location and will be removed when construction activities are complete. The Designated Biologist or Biological Monitor will inspect the fencing on a biweekly basis to ensure that no holes develop that could allow desert tortoises to enter the work areas. If holes are found, they will be repaired immediately. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • If desert tortoises are found within an area that has been fenced to exclude them, activities will cease until the Designated Biologist or Biological Monitor moves the desert tortoises out of harm's way outside of the fence, no greater than 1,640 feet (500 meters) away from their original location. At this time, the fencing will be inspected for holes. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • If desert tortoises are found in a construction area where fencing was deemed unnecessary, the tortoise will be moved per the Desert Tortoise Plan. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • Any desert tortoises found during clearance surveys will be translocated per the Desert Tortoise Plan. Monitoring of active construction outside fenced areas will be continuous. A monitor must be onsite to address any tortoises found inside fenced areas that are not fully graded. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • The Designated Biologist or Biological Monitor will follow the handling guidelines at all times if handling desert tortoises is required. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. • The Designated Biologist or Biological Monitor will have the authority to stop all activities until appropriate corrective measures have been completed. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
SCE will restrict work to daylight hours, except during an emergency, to avoid nighttime activities when desert tortoises may be present on the access road. Traffic speed will be maintained at 15 miles per hour (24 kilometers per hour) or less in the work area. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. The temporary ground disturbance associated with the trenching will occur within previously disturbed areas, and will not require rehabilitation or restoration. However, for any construction laydown areas required for the SCE downstream upgrade that will result in soil excavation or surface scouring in nondisturbed areas supporting native vegetation, the following shall be implemented to restore native vegetation: [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. 1. Stockpile Topsoil. To increase chances for revegetation success in temporarily disturbed areas of native vegetation, topsoil shall be stockpiled from the Project work area where temporary disturbances include vegetation removal and soil excavation (e.g., trenching for the installation of fiber-optic cable conduit) for use in revegetation. Native topsoil from the least disturbed locations of temporary excavations, and only areas that are free of noxious weeds, shall be used as a source of topsoil. Topsoil shall be stockpiled from the areas of native vegetation identified for disturbance at a particular site for use in revegetation of temporarily disturbed soils. Two (2) to three (3) inches of soil shall be scraped and stockpiled for use in revegetation of temporarily disturbed areas. Elements related to the collection and stockpiling of topsoil shall be conducted as described on pages 39-40 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. 2. Restore Temporarily Disturbed Areas. Only seed from locally occurring species shall be used for revegetation. Seeds shall contain a mix of short-lived early pioneer species such as native annuals and perennials and subshrubs (for example, cheesebush, matchweed, peppergrass, rabbitbrush, creosote bush, burro-weed, needlegrass, rice grass, and goldenhead). Seeding shall be conducted as described in Chapter 5 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003). A list of plant species suitable for Mojave Desert region revegetation projects, including recommended seed treatments, are included in Appendix A-8 of the same report. The list of native plants observed during surveys of the Project area can also be used as a guide to site-specific plant selection for revegetation. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. 3. Control Noxious Weeds. Maintain percent cover of noxious weeds (species considered “moderate” or “high” threat to California wildlands as defined by the California Invasive Plant Council [CAL-IPC 2006] and noxious weeds rated “A” or “B” by the California Department of Food and Agriculture [CDFA] and any Federal-rated pest plants [CDFA 2009]) below current levels in rehabilitated areas. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. 4. Performance Standard. Since all temporary impacts are to be mitigated as permanent, in the form of habitat replacement at set ratios, no performance standard shall be put in place on the success of the restoration of these areas. Implementation of the measures outlined in BIO-12, and the documentation of the restoration activities by the Designated Biologist shall be sufficient for adherence to this measure. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31]. 5. Reporting. The Designated Biologist shall record the following information for any restoration activity: a) the locations (narrative and maps) and dates of habitat restoration; b) extent of surface area disturbed and restored; c) type and source of native seed mix used; d) general description of the pre-disturbance site (plant species diversity, presence of invasive plant species, etc.); and e) a general description of the areas immediately surrounding the restoration site (plant species diversity, presence [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-31].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
32. The project owner shall provide a copy of the Biological Opinion per Section 7 of the federal Endangered Species Act written by the U.S. Fish and Wildlife Service in consultation with U.S. Department of Energy. The terms and conditions contained in the Biological Opinion shall be incorporated into the project's BRMIMP and implemented by the project owner. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-32].	X-COC	X (except as noted)
33. To fully mitigate for habitat loss and incidental take of desert tortoise and Mohave ground squirrel as well as burrowing owl, the project owner shall acquire, prior to ground-disturbing activities, in fee or in easement, no less than 118.2 acres of land suitable for these species and shall provide funding for the enhancement and long-term management of these compensation lands. The responsibilities for management of the compensation lands may be delegated by written agreement to CDFG or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFG and USFWS prior to land acquisition or management activities. If habitat disturbance exceeds that described in this analysis, the project owner shall be responsible for acquisition and management of additional compensation lands and/or additional funds required to compensate for any additional habitat disturbances. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. Agreements to delegate land acquisition or management shall be implemented within 12 months of the Energy Commission's decision. The acquisition and management of compensation lands shall include, but is not limited to, the following elements: [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. 1. *Selection Criteria for Compensation Lands*. The compensation lands selected for acquisition or title/easement transfer shall: [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. A. have substantial capacity to support resident and dispersing desert tortoise, MGS, and burrowing owl; [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. B. be a contiguous block of land (preferably) or located so that parcel(s) result in a contiguous block of protected habitat; [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. C. not be encumbered by easements or uses that will preclude fencing of the site or preclude management of the site for the primary benefit of the species for which mitigation lands were secured; [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. and D. include mineral/water rights or ensure that those rights may not be evoked in a manner to negate the value of the compensation lands. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. 2. *Review and Approval of Compensation Lands Prior to Acquisition or Title/Easement Transfer*. A minimum of three months prior to acquisition or transfer of the property title and/or easement, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a proposal to the CPM, CDFG, and USFWS describing the parcel(s) intended for purchase or title/ easement transfer. This proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for desert tortoise, MGS, and burrowing owl in relation to the criteria listed above. Approval from the CPM, in consultation with USFWS and CDFG, shall be required for acquisition of all parcels comprising no less than 118.2 acres in advance of purchase or title/easement transfer. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. 3. *Review and Approval of Compensation Lands Management Plan*. Within six months of the land or easement purchase or transfer, as determined by the date on the title, the project owner, or a third-party approved by the CPM, in consultation with CDFG and USFWS, shall submit a compensation lands management plan to the CPM, CDFG, and USFWS. The plan shall include, but not be limited to proposed measures to enhance habitat (e.g., removal of structures and other human attractants); maintenance procedures; general maintenance provisions (e.g., trash dumping, trespass, pesticide use avoidance, etc.). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
4. *Mitigation. Security for Compensation Lands and Avoidance/Minimization Measures*. The project owner shall provide financial assurances to the CPM, with copies of the document(s) to CDFG and USFWS, to guarantee that an adequate level of funding is available to implement all biological avoidance, minimization, and compensation measures described in the conditions of certification**.** These funds shall be used solely for implementation of the measures associated with the project. The project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating ground-disturbing project activities. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].		
5. *Conditions for Acquisition of Compensation Lands*. The project owner shall comply with the following conditions relating to acquisition of compensation lands or transfer of the property's title and/or easement after the CPM, in consultation with CDFG and USFWS, has approved the proposed compensation lands as described above. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].		
A. Preliminary Report: The project owner, or approved third party, shall provide a recent preliminary title report (no more than six months old), hazardous materials survey report (i.e., Phase I ESA), biological analysis, and other necessary documents for the proposed 118.2 acres. All documents conveying or conserving compensation lands and all conditions of title/easement are subject to a field review and approval by the CPM, in consultation with CDFG and USFWS, California Department of General Services and, if applicable, the Fish and Game Commission and/or Wildlife Conservation Board. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].		
B. Title/Conveyance: The project owner shall transfer fee title/deed or a conservation easement for the 118.2 acres of compensation lands to CDFG under terms approved by CDFG. Alternatively, a CPM-approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 may hold fee title or a conservation easement over the compensation lands. In the event an approved non-profit holds title, a conservation easement shall be recorded in favor of CDFG in a form approved by CDFG and USFWS; in the event an approved nonprofit holds a conservation easement over the compensation lands, CDFG shall be named a third party beneficiary. USFWS shall be named a third party beneficiary regardless of who holds the easement. The project owner shall also provide a property assessment and warranty. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].		
C. Enhancement Fund. The project owner shall fund the initial protection and enhancement of the 118.2 acres by providing the enhancement fund to the CDFG. Alternatively, a CPM approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 to manage the compensation lands may hold the enhancement funds. If CDFG takes fee title to the compensation lands, the enhancement fund must go to CDFG. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].		
D. Endowment Fund: Prior to ground-disturbing project activities, the project owner shall provide to CDFG a capital endowment in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis that will be conducted for the 118.2 acres of compensation lands. Alternatively, a CPM-approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 may hold the endowment fees. If CDFG takes fee title to the compensation lands, the endowment must go to CDFG, where it will likely be held in the special deposit fund established pursuant to Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation will manage the endowment for CDFG and with CDFG guidance. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].		
The project owner and the CPM shall ensure that an agreement is in place with the endowment holder/manager to ensure the following:		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• Interest. Interest generated from the initial capital endowment 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 designed to protect or improve the habitat values of the compensation lands. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. • Withdrawal of Principal. The endowment principal shall not be drawn upon unless such withdrawal is deemed necessary by the CDFG or the approved third-party endowment manager to ensure the continued viability of the species on the 118.2 acres. If CDFG takes fee title to the compensation lands, monies received by CDFG pursuant to this provision will likely be deposited in a special deposit fund established pursuant to Government Code section 16370. If the special deposit fund is not used to manage the endowment, the California Wildlife Foundation will manage the endowment for CDFG and with CDFG guidance. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. E. Pooling Endowment Funds. CDFG, or a CPM-approved, in consultation with CDFG and USFWS, non-profit organization qualified pursuant to California Government Code section 65965 to hold endowments may pool the endowment with other endowments for the operation, management, and protection of the 118.2 acres for local populations of desert tortoise and MGS. However, for reporting purposes, the endowment fund must be tracked and reported individually. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. F. Security Deposit. The project owner may proceed with ground disturbing activities before fully performing its compensatory mitigation duties and obligations as set forth above only if the project owner secures its performance by providing funding to CDFG (Security Deposit), or if CDFG approves, administrative proof of funding, necessary to cover easement costs, fencing/cleanup costs, and as necessary, initial protection and enhancement of the compensation lands. If the Security is provided to allow the commencement of project disturbance prior to completion of compensation actions, the project owner, CDFG, or a third-party entity approved by the CPM, in consultation with CDFG and USFWS, may draw on the principle sum if it is determined that the project owner has failed to comply with the conditions of certification. The security will be returned to the project owner upon completion of the legal transfer of the compensation lands to CDFG or approved third-party entity, or upon completion of an implementation agreement with a third party mitigation banking entity acceptable to the CPM and CDFG, to acquire and/or manage the compensation lands. The Security is calculated as follows: [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. • Costs of enhancing compensation lands are estimated at $250 per acre. Costs of establishing an endowment for long-term management of compensation lands are estimated at $1,300 per acre. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. G. Reimbursement Fund. The project owner shall provide reimbursement to the CDFG or approved third party for reasonable expenses incurred during title, easement, and documentation review; expenses incurred from other state agency reviews; and overhead related to providing compensation lands. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33]. The project owner is responsible for all compensation lands acquisition/easement costs, including but not limited to, title and document review costs, as well as expenses incurred from other state agency reviews and overhead related to providing compensation lands to the department or approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures. The project owner may choose to satisfy its mitigation obligations by paying an in-lieu fee instead of acquiring compensation lands to mitigate for 118.2 acres of habitat, pursuant to California Senate Bill 34 (enacting CESA § 2069 and 2099) or other applicable in-lieu fee provision, to the extent the in-lieu fee provision is found by the Energy Commission to be in compliance with CEQA and CESA requirements. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-33].		

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
34. To protect golden eagles within a 10 mile radius of the AMSP site the project will provide funding in the amount of $60,000 to the U.S. Fish and Wildlife Service (Service), to be spent by the Service on monitoring and other actions that the Service determines will be beneficial to golden eagles located in a 10-mile radius of the AMSP. ASI may provide funds to implement this measure into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF). It is anticipated that the $60,000 payment may be used to fund actions such as (1) a 10-year monitoring program for the Black Mountain golden eagle nesting pair, which is located within a 10-mile radius of the AMSP; (2) implementing road restrictions along Black Mountain Road by placing large boulders along the road in those sections directly alongside the golden eagle nests; and (3) implementing seasonal road closures of Black Mountain Road by erecting steel gates at the northern and southern ends of Black Mountain Wash. The funds also may be spent on other actions deemed by the Service to be beneficial to golden eagles within a 10 mile radius of the AMSP. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-34]. Pursuant to CEC License Decision Condition of Certification LAND-1, ASI will mitigate for the loss of 128 acres of agricultural land recently under production on the plant site by providing for the purchase of 128 acres of comparable agricultural land or an easement guaranteeing 128 acres of comparable land will be available in perpetuity for productive agricultural use. This will also provide foraging habitat for golden eagles within the project area. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-34]. Pursuant to CEC License Decision Condition of Certification BIO-20, ASI will ensure continuity of water delivery to the Harper Dry Lake ACEC by providing an alternate well able to effectively convey a minimum of 75-acre feet per year to the Harper Dry Lake marsh. To ensure continuity of water delivery to the Harper Dry Lake ACEC the project owner shall not decommission the existing well on Mojave Solar, LLC-owned property that currently serves the Harper Dry Lake marsh (wetland well) until an alternate well is able to effectively convey a minimum of 75 acre feet per year to the Harper Dry Lake marsh. This condition of certification does not transfer to Mojave Solar, LLC the obligation of Luz Solar Partners Ltd. to allow BLM to pump 75 acre feet of water per year to the marsh, under SEGS IX Condition of Certification **BIO-11.k**. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-34]. Pursuant to CEC License Decision Condition of Certification BIO-15, ASI will provide 118.2 acres of land suitable for desert tortoise, Mojave ground squirrel and burrowing owl to compensate for the loss of habitat for these species on the plant site. The compensation land is located directly west of the MSP plant site and will provide suitable foraging habitat for golden eagles. ASI also will provide funding for the enhancement and long-term management of the compensation lands. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-34].	X-COC	X (except as noted)
35. The project owner shall provide documentation to the CPM that the project is in compliance with the Bald and Golden Eagle Protection Act (Title 16, United States Code, sections 668-668d). [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-35].	X-COC	X (except as noted)
36. The project owner shall prepare and implement a Bird Monitoring Study to monitor the death and injury of birds from collisions with facility features such as reflective mirror-like surfaces and from heat, and bright light from concentrating sunlight. The study design shall be approved by the CPM in consultation with CDFG and USFWS, and shall be incorporated into the project's BRMIMP and implemented. The Bird Monitoring Study shall include detailed specifications on data and carcass collection protocol and a rationale justifying the proposed schedule of carcass searches. The study shall also include seasonal trials to assess bias from carcass removal by scavengers as well as searcher bias. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-36].	X-COC	X (except as noted)
37. Avoidance and minimization measures for the SWHA, a State-listed threatened species, will include: [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-37]. • Pre-construction surveys of the AMSP site and a surrounding 0.5-mile buffer, per the recommended CDFG survey methodology for the species (CDFG 2000b).	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Biological Resources (cont.)		
• If active nesting is documented within a 0.5-mile radius of the site during the surveys, Mojave Solar will coordinate with CDFG to develop additional conservation measures, such as nest monitoring during construction or delaying construction activities near the nest until all chicks have fledged. Mitigation for the loss of SWHA foraging habitat will be offset by the preservation of the compensation lands. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF BIO-37].		
38. The project owner shall design and implement an Evaporation Pond Monitoring and Adaptive Management Plan that meets the requirements of the USFWS, CDFG, RWQCB, and the CPM. The objective of the Plan is to define the monitoring and reporting procedures as well as triggers for adaptive management strategies that shall be implemented to prevent wildlife mortality at the evaporation ponds. The plan shall include the following: • A description of evaporation pond design features such as side slope specifications, freeboard and depth requirements, which will prevent use by wildlife. • A detailed description of the wildlife monitoring procedures and schedule. For the initial implementation of a new technology, daily monitoring shall be conducted both at the project evaporation ponds and the wetlands within the Harper Lake ACEC. Monitoring may be reduced to weekly and potentially bi-weekly or monthly depending on the results of initial monitoring period. • A detailed description of the water quality and water level monitoring procedures and schedule. Water quality and water level monitoring shall coincide with wildlife monitoring to provide a basis for comparative analysis. • A description of wildlife exclusion/deterrent technologies and adaptive management strategies. Technologies shall include but are not limited to netting, and shall not disturb or harass non-target wildlife adjacent to the project area. • Triggers for adaptive management (i.e., modifications to existing technology or replacement with new technology). Adaptive management shall be necessary if:1)more than one dead bird per quarter is discovered at the evaporation ponds; or 2)one special-status animal is discovered at the evaporation ponds; or 3) noise levels attributable to the technology exceed 60 dBA at the Harper Lake ACEC wetlands. After three failed attempts at new technology, the ponds shall be netted. • Reporting requirements, to include monthly reporting for the first year if a technology other than netting is used. Reporting may be reduced to monthly or quarterly thereafter if no bird or wildlife deaths are reported during the first year. If wildlife mortality occurs at the ponds or if birds are disturbed at the marsh as described above, the CPM shall be notified within 10 days of the incident and the accompanying adaptive management action to implemented. • Evaporation pond monitoring and reporting shall continue for the life of the project. The draft Plan submitted by the Applicant (AS 2009d) shall provide the basis for the final plan, subject to review and revisions form the CPM in coordination with USFWS, CDFG, and RWQCB. For the CPM and CDFG to deem the eradication successful: • The site shall not contain more than 5% exotic plant species for the CPM and CDFG to deem the tamarisk removal successful. • All plant species with rates of dispersal and establishment listed as “High” or “Moderate” on the California Invasive Plant Inventory shall have documented absence, or have been removed for the site for at least three years for the CPM and CDFG to deem the site successful. • The site shall not contain invasive wildlife species for the CPM and CDFG to deem the site successful. Monitoring and maintenance of the site shall be conducted for five years unless less monitoring can be justified. Following the first year of monitoring, if the project owner petitions to terminate the monitoring program, staff and CDFG will determine whether more years of monitoring are needed.	X-COC	X (except as noted)

TABLE B-2 (Continued)
AGENCY-IMPOSED MEASURES FOR THE ABENGOA MOJAVE SOLAR PROJECT

Agency-Imposed Design Features, Environmental Protection Measures, and BMPs	Responsible Party	
	Mojave Solar	SCE
Cultural Resources		
1. A Monitoring Plan will be developed prior to start of construction. The document will provide protocols for construction monitoring and procedures in the event unanticipated cultural material is encountered during construction.	X-COC	X (except as noted)
2. All sub-surface ground-disturbing activities shall be monitored by a qualified archaeologist.	X-COC	X (except as noted)
3. A Monitoring report documenting the results of the monitoring will be prepared and submitted to BLM.	X-COC	X (except as noted)
4. In the event of the discovery of unanticipated cultural material, the qualified archaeologist will coordinate with the Project construction manager and environmental compliance manager to stop all work in the vicinity of the find until the BLM archaeologist can be notified and the find can be assessed. If the discovery is determined to be not eligible, work will be allowed to continue. [SCE IS NOT RESPONSIBLE FOR IMPLEMENTING THIS PORTION OF CUL-4].	X-COC	X (except as noted)
5. Based on the Native American contact program, Native American representatives have expressed interest in involvement in construction monitoring. The project owner will coordinate with local Native American tribes regarding their participation in construction monitoring.	X-COC	X (except as noted)
6. Avoidance of cultural resources determined eligible for listing in the NRHP is preferred. If cultural resources are discovered during construction that are determined to be eligible to the NRHP, the BLM archaeologist shall be notified and BLM, the SHPO, and other interested parties will consult regarding effects. Whenever practicable, cultural resource discovered during construction that are determined eligible for listing in the NRHP will be left in place and preserved from damage. If avoidance is not feasible, adverse effects will be addressed in a Memorandum of Agreement.	X-COC	X (except as noted)

NOTE 1: Applies only where ground disturbance is expected (trenching, replacement poles and interset poles).

NOTE: CEC Conditions of Certification are included in Table B-2 for ease of reference for air quality and biology; CEC conditions of certification for other resource areas are referred to in their respective EA sections, which are incorporated by reference in the Draft IS/MND.

SOURCE: DOE EA Appendix S.

TABLE B-3
MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM FOR THE LOCKHART SUBSTATION PROJECT

Environmental Impact	Mitigation Measures Proposed in this IS/MND	Implementing Actions	Monitoring/Reporting Requirements	Timing
Aesthetics				
None required				
Agricultural and Forestry Resources				
None required				
Air Quality				
None required				
Biological Resources				
Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service	**Mitigation Measure CPUC-BIO-1:** Floristic surveys shall be conducted along ~~**downstream**~~ **SPS** upgrades in accordance with CDFG Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG, 2009). Rare plants encountered shall be subject to the following: **a. Incorporate site design modifications to minimize impacts to special-status plants by limiting the width of linear work areas and adjusting the location of staging areas, lay downs, spur roads and poles or towers as appropriate to avoid or minimize impacts to rare plant populations.** **b. The Designated Biologist shall establish Environmentally Sensitive Areas around rare plant occurrences at a minimum of 20 feet from the uphill side of a rare plant occurrence and 10 feet from the downhill side where practicable. Equipment and vehicle maintenance areas, and wash areas, shall be located 100 feet from any occurrences.** **c.** ~~**a.**~~ Plant species shall be included in the Worker Environmental Awareness Program. **d.** ~~**b.**~~ If California Rare Plant Rank 1 plants are detected in the Project disturbance area, the Project owner shall prepare and implement a Special-Status Plant Mitigation Plan, with a goal of retaining at least 75% of the local population of the affected species. Compensatory mitigation at a ratio of 3:1 shall be required for the portion that is not avoided. At a minimum, the Plan shall include a description and discussion of the species, a description of avoidance and minimization measures, and a compensation plan if total avoidance is not possible. **e.** ~~**c.**~~ If California Rare Plant Rank 2 plants are detected in the Project disturbance area, the Project owner shall prepare and implement a Special-Status Plant Mitigation Plan, with a goal of retaining at least 75% of the local			

TABLE B-3 (Continued)
MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM FOR THE LOCKHART SUBSTATION PROJECT

Environmental Impact	Mitigation Measures Proposed in this IS/MND	Implementing Actions	Monitoring/Reporting Requirements	Timing
Biological Resources (cont.)				
	population of the affected species. Compensatory mitigation at a ratio of 2:1 shall be required for the portion that is not avoided. At a minimum, the Plan shall include a description and discussion of the species, a description of avoidance and minimization measures, and a compensation plan if total avoidance is not possible. **f.** ~~**d.**~~ Where compensatory mitigation is required, it shall consist of acquisition of habitat supporting the target species, or restoration/enhancement of existing populations. 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. 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. **g.** ~~**e.**~~ If California Rare Plant Rank 3 plants are detected in the Project disturbance area, and the occurrence has local or regional significance, the occurrence shall be treated as a Rank 2 plant species, as above. A plant occurrence would be considered to have local or regional significance if: (1) it occurs at the outermost periphery of its range in California; (2) it occurs in an atypical habitat, region, or elevation for the taxon that suggests the occurrence may have genetic significance; or (3) it exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or subspecies. **h.** ~~**f.**~~ For all rare plant impacts, seeds shall be collected from the affected plants onsite, prior to construction, to conserve germplasm and provide a seed source for restoration efforts. Seed shall be collected under the supervision or guidance of a reputable seed storage facility, and costs associated with long-term storage shall be the responsibility of the Project owner.			
Cultural Resources				
None required				
Geology, Soils, and Seismicity				
None required				

TABLE B-3 (Continued)
MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM FOR THE LOCKHART SUBSTATION PROJECT

Environmental Impact	Mitigation Measures Proposed in this IS/MND	Implementing Actions	Monitoring/Reporting Requirements	Timing
Greenhouse Gas Emissions				
Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases	**Mitigation Measure CPUC-GHG-1: Low SF_6 Leak Rate Circuit Breakers and Monitoring.** The Applicant shall ensure that the new circuit breakers installed at the Lockhart Substation have guaranteed SF6 leak rates of 0.5 percent by volume or less. The Applicant shall provide CPUC with documentation of compliance, such as specification sheets, prior to installation of the circuit breakers. In addition, the Applicant shall annually monitor the SF6-containing circuit breakers at the substation for the detection and repair of leaks. The Applicant shall annually report its Lockhart Substation-related SF6 emissions to the CPUC until a regulation is approved by the OAL that approves a regulation requiring annual reporting of SF6 emissions to CARB.			
Hazards and Hazardous Materials				
None required				
Hydrology and Water Quality				
None required				
Land Use and Planning				
None required				
Mineral Resources				
None required				
Noise				
None required				
Population and Housing				
None required				
Public Services				
None required				
Recreation				
None required				

TABLE B-3 (Continued)
MITIGATION MONITORING, REPORTING AND COMPLIANCE PROGRAM FOR THE LOCKHART SUBSTATION PROJECT

Environmental Impact	Mitigation Measures Proposed in this IS/MND	Implementing Actions	Monitoring/Reporting Requirements	Timing
Transportation and Traffic				
None required				
Utilities and Service Systems				
None required				