Tessera Solar
power from stirling energy systems

DOCKET
08-AFC-13
DATE AUG 23 2010
RECD. AUG 23 2010

August 23, 2010

Mr. Christopher Meyer
CEC Project Manager
Attn: Docket No. 08-AFC-13
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512

RE: Calico Solar (formerly Solar One) Project (08-AFC-13)
Applicant's Submittal of Post-Hearing Brief

Dear Mr. Meyer:

Tessera Solar hereby submits its Post-Hearing Brief. I certify under penalty of perjury that the foregoing is true, correct, and complete to the best of my knowledge.

Sincerely,

Felicia L. Bellows
Vice President of Development

Tessera Solar | 4800 N. Scottsdale Road | Suite 5500 | Scottsdale, AZ 85251 | P +1 602 535 3576 | F +1 602 535 3617 | tesserasolar.com

This Page Intentionally Left Blank

STATE OF CALIFORNIA
Energy Resources Conservation
and Development Commission

Calico Solar (formerly known as SES Solar One) Project Calico Solar, LLC	))))	**Docket No. 08-AFC-13**

APPLICANT CALICO SOLAR'S POST-HEARING BRIEF

Allan Thompson
Attorney at Law
21 C Orinda Way #314
Orinda, CA 94563
Email: allanori@comcast.net

Ella Foley Gannon, SBN 197591
Bingham McCutchen LLP
Three Embarcadero Center
San Francisco, CA 94111-4067
Telephone: 415.393.2000
Facsimile: 415.393.2286
email: ella.gannon@bingham.com

Attorneys for Applicant
Calico Solar, LLC

STATE OF CALIFORNIA
Energy Resources Conservation
and Development Commission

Calico Solar (formerly known as SES Solar One) Project Calico Solar, LLC	))))	**Docket No. 08-AFC-13**

I. INTRODUCTION AND SUMMARY

The CEC is charged with helping California meet the Renewable Portfolio Standard requirements established by the Legislature, and must approve a number of solar facilities to do so. The Calico Project should be one of the approved facilities. As CEC Staff has noted, this solar project would "help in reducing greenhouse gas emissions from gasfired generation" as well as "provide much needed electrical power to California residences and businesses, and would contribute to electric reliability." Supplemental Staff Assessment, ES-37-38. Specifically, it will provide 850 megawatts of clean, renewable electricity to the ratepayers of Southern California Edison (SCE). Staff also correctly pointed out the Project will have "positive transmission system impacts ... because the Calico Solar Project would supplement local solar generation and import of power to the SCE system, helping to meet the increasing load demand in San Bernardino County." *Id.* at ES-38. These and the additional benefits from the project of helping phase out coastal power plants that use once-through cooling; creating jobs locally and nationally; stimulating the local, state, and national economy; and reducing air pollution from existing fossil power plants are uncontroverted in the record for this proceeding.

The Calico Project has been carefully refined both before and during the permitting process in response to input from the Commission, state and federal agencies, environmental groups and the public to avoid or reduce impacts wherever feasible, while retaining a utility scale project. The Project site was originally selected with the support and guidance of the Bureau of Land Management. It is located adjacent to a freeway, rail line, gas pipeline, and transmission line. The Project has been reduced by

approximately 25% of its original size to avoid environmental resources. *Id.* at ES-2. It is designed to avoid the majority of the cultural, biological, and flood prone areas of the site and to minimize the distance needed for a potential desert tortoise translocation. The northern boundary has been located approximately 4,000 feet from the toe of the Cady Mountains in order to allow for a tortoise corridor to the north of the site. The Project now avoids big horn sheep foraging habitat, includes a substantial buffer between the Project and bighorn sheep and golden eagle habitat, and has reduced impacts on special status plants. It has been specifically adjusted to incorporate cultural resource avoidance and biological resource mitigation requirements. Ex. 63 (Felicia Bellows Testimony, June 30, 2010, Answer 6); Ex. 82 (Felicia Bellows Rebuttal Testimony, July 29, 2010, Answer 8). The reduced acreage allows the Project to avoid or minimize impacts to protected animals, special status plants, and cultural resources. The resulting project fulfills the state's mandate to produce renewable energy and reduce greenhouse gas emissions in a manner and on a site that avoids most significant environmental impacts and mitigates unavoidable impacts to the maximum extent feasible.

The Project complies with all applicable LORS, will be operated in a safe and reliable manner, and will result in few unmitigated significant adverse environmental impacts. There is ample evidence in the record that the Project has specific economic, social, technological, and other benefits that outweigh its unavoidable adverse environmental effects and support a finding of overriding considerations under the California Environmental Quality Act. There is also ample evidence to demonstrate that the Project's significant public benefits when considered on balance with its environmental concerns would support a finding of public convenience and necessity if one was to be required.

The Applicant also requests that the Commission modify some of Staff's proposed Conditions of Certification as set forth in Exhibit A to this brief. While the Applicant and Staff have reached agreement regarding most issues relating to the conditions, further modifications are necessary to conform to the evidence presented, to ensure mitigation is proportionate to impacts, for workability, and for clarity.

II. THE CALICO PROJECT IS RELIABLE

The Commission must determine whether the Project will be designed, sited, and operated to ensure safe and reliable operation. Pub. Res. Code § 25520(b); 20 Cal. Code Regs. § 1752(b)(2). In determining if a project has adequate system reliability, the Commission must examine whether an individual power plant will be built and operated to the traditional level of reliability reflected in the power generation industry. A power plant that compares favorably to industry norms is not likely to degrade the overall reliability of the electric system it serves. There record demonstrates that SunCatcher technology is reliable, and that this standard is met.

Calico's SunCatcher technology has been extensively tested at Sandia National Laboratory and the McLaren test facilities, and it has been reliably deployed commercially at Tessera Solar's Maricopa Solar facility. Maricopa Solar, located outside of Phoenix, has been operating as expected at high availability. Transcript, Votaw Testimony, August 4, 2010, at 153. The technology's successful commercial operation, along with other positive research and development and testing efforts, ensures that the Project will have the necessary reliability to provide electricity to the grid.

A SunCatcher unit consists of a large mirrored-surface dish, a Stirling engine, and a small electrical generator. Ex. 1 (Application for Certification, SES Solar One, LLC), December 2, 2008 (hereinafter "Application for Certification") at 3-2; Ex. 80 (Prepared Direct Testimony of Waymon Votaw) (hereinafter "Votaw Prepared Testimony") at 1-2. Stirling engines were invented in the nineteenth century and are used today in submarines and auxiliary power generators, among other applications. Ex. 1 (Application for Certification) at B-1; Ex. 80 (Votaw Prepared Testimony) at 1.

The SunCatcher technology has more than 20 years of recorded operating history and has been tested under a broad range of conditions. Ex. 1 (Application for Certification) at 3-1, 3-12; Ex. 80 (Votaw Prepared Testimony) at 2. McDonnell Douglas was the first company to deploy field prototypes in 1984. Ex. 80 (Votaw Prepared Testimony) at 2. From 2004 to 2006, the SunCatcher technology was installed at Sandia National

Laboratory, where it has since been subjected to over 30,080 aggregate on-sun hours of testing under all types of conditions. *Id.* Based on the Sandia results, the technology has been modified to improve its efficiency, reliability, and commercial applicability. *Id.*

The Maricopa Solar facility put this refined SunCatcher technology into commercial operation and has demonstrated its ability to provide reliable power. *Id.* at 3; Transcript, Votaw Testimony, August 4, 2010, at 152-53. In part, Tessera Solar built Maricopa Solar to help demonstrate the ability to scale up the SunCatcher technology for use in utility-scale applications, and the demonstration has been successful. Ex. 80 (Votaw Prepared Testimony) at 2. Since Maricopa Solar entered into full commercial operation on March 15, 2010, the facility has been operating with SunCatcher availability operating at 97.4 percent and overall "balance of plant equipment" at 96.1 percent availability. Transcript, Votaw Testimony, August 4, 2010, at 153. Furthermore, because the demonstration has allowed Tessera Solar to resolve availability issues as they have arisen over time, the performance of Maricopa Solar is expected to improve. Ex. 80 (Votaw Prepared Testimony) at 3-4. Finally, Maricopa Solar meets all of its PPA's performance requirements. Transcript, Bellows Testimony, August 4, 2010, at 178-79.

The Maricopa Solar facility consists of 60 SunCatchers that generate 1.5 MW of power. Ex. 80 (Votaw Prepared Testimony) at 3; Transcript, Votaw Testimony, August 4, 2010, at 150. This 1.5 MW group – itself a fully operational, commercial power plant – is the "building block" for larger facilities. Transcript, Votaw Testimony, August 4, 2010, at 154; Transcript, Reiff Testimony, August 4, 2010, at 158. The technology is modular, such that if the initial module functions well, it can be scaled up significantly to have the same, if not better, functionality as part of a larger facility. Ex. 80 (Votaw Prepared Testimony); Transcript, Votaw Testimony, August 4, 2010, at 154-55; Transcript, Reiff Testimony, August 4, 2010, at 158, 161-62, 186-87.

Further, the Calico Project has the benefit of the lessons learned and solutions applied at Maricopa Solar. Ex. 80 (Votaw Prepared Testimony) at 4. The Applicant accordingly expects the Project to have even better performance than that demonstrated at

Maricopa Solar. Ex. 80 (Votaw Prepared Testimony) at 4. The Maricopa facility, in even its early days of operations, is within "striking distance" of 98 percent availability, and its availability is trending up as operations continue. *Id.*; Ex. 80 (Votaw Prepared Testimony) at 3. The Calico Project has a target of 98 percent availability after the first year. Transcript, Votaw Testimony, August 4, 2010, at 153.

Further testing or demonstration of the SunCatcher technology is not needed before the Commission can approve a large-scale project like the proposed Project. The 1.5 MW Maricopa Solar facility has been successful, and there is nothing that prevents the Applicant from scaling up this success. There is no evidence that the SunCatcher technology is unreliable. The only evidence cited in the SSA is testimony provided by Dr. Barry L. Butler at a Public Utilities Commission hearing in 2007. Ex. 300 (SSA) at D.4-4. At that proceeding, Dr. Butler testified that the Stirling solar technology "holds much promise," but should be demonstrated at the 1 MW, 10 MW, and 100 MW levels before large-scale commercial plants begin operations. Ex. 508 (Phase I Direct Testimony of Dr. Barry Butler on Behalf of Conservation Groups, California Public Utilities Commission, App. No. 06-08-010, June 1, 2007) (hereinafter "Butler Testimony") at 6-7. This testimony, however, does not speak to the reliability of the technology to be utilized at the Calico Solar Project for several reasons. First, Dr. Butler's conclusions relied on an analysis of a competitor's equipment, not the equipment used at Maricopa Solar. Although similar in base design, the equipment used at Maricopa is "drastically different" than the equipment analyzed by Dr. Butler. Transcript, Votaw Testimony, August 4, 2010, at 155. Second, because the state of the technology has changed since 2007, his conclusions are not based on existing information. *Id.* Since Dr. Butler's 2007 testimony, the Stirling engine has gone well beyond the prototype stage. *Id.* at 155-56. Third, Dr. Butler failed to consider the modular nature of the SunCatcher technology and the resulting scalability that it allows. In light of this modularity, demonstrating a variety of points of scalability would serve no purpose. Transcript, Reiff Testimony, August 4, 2010, at 186-87.

Dr. Butler testified about equipment failures, but not about the Calico Project's technology. The Maricopa Solar equipment has gone through a full prototype stage and

two generations of equipment. Transcript, Votaw Testimony, August 4, 2010, at 156. As a result, the prototype reliability issues mentioned by Dr. Butler have been addressed through modifications to the SunCatchers. *Id.* This is part of the reason for the success at Maricopa. The SunCatchers deployed at Maricopa Solar have experienced approximately 6,600 hours of run time between failures.[1]

Given the extensive testing at Sandia, the performance of the Maricopa Solar plant, and the modularity and scalability of the SunCatcher technology, the evidence before the Commission only supports the conclusion that the Project will be reliable.

III. THE SUPPLEMENTAL STAFF ASSESSMENT APPROPRIATELY ANALYZES THE PISGAH LUGO CORRIDOR AND THE REASONABLY FORESEEABLE ACTIONS TO CONNECT THE CALICO PROJECT TO THE GRID

The SSA describes the transmission line upgrades that will be constructed as part of the Calico Solar Project, including a new on-site substation and a single circuit 230 kV transmission line connecting to the existing Southern California Edison's (SCE) Pisgah Substation and the reasonably foreseeable future actions which include SCE network upgrades. In written testimony, CURE's witness, David Marcus, asserted that the SSA fails to analyze transmission infrastructure needed for the Project, specifically "pre project upgrade requirements," and "downstream transmission upgrades," the latter of which "will require significant ground disturbance." Ex. 400 (Opening Testimony of David Marcus) (hereinafter "Marcus Opening Testimony") at 4. This complaint is without merit. The SSA analyzes these impacts in detail using the available information in each section of the SSA. Ex. 300 (SSA) at sections B.1.2, B.1.4, B.1.5, B.3.4, C.1.8, C.2.7, C.3.11, C.4.8, C.5.8, C.6.8, C.7.8, C.8.8, C.9.8, C.10.8, C.12.8, C.13.8, C.14.8, C.15.8. This analysis fully informs the Commission regarding the potential impacts associated with the Project and reasonably foreseeable projects as required under the Commission's regulations and CEQA.

---

[1] Whatever the merit of Dr. Butler's recommendation of 2,000 to 10,000 hours of run time to prove utility-scale commercial viability, that standard is met. Transcript, Reiff Testimony, August 4, 2010, at 160, 168-69; *see* Ex. 508 (Butler Testimony) at 5.

The SSA describes the transmission system interconnection and upgrades, *see, e.g.*, Ex. 300 (SSA) at C-2-117 – C.2-127 (biological resources), *id.* at B.1-17 – B.1-18, and describes reasonably foreseeable future actions, which include California Public Utilities Commission (CPUC) and BLM approval of other transmission line upgrades. *Id.* at B.1-18 – B.1-19. The projections are not absolutely certain and are therefore subject to change simply because no projections of future circumstances can be absolutely certain. Transcript, Hesters Testimony, August 4, 2010, at 243-44. Nonetheless, the SSA contains detailed information regarding the "potential impacts of future transmission line construction, line removal, substation expansion, and other upgrades that may be required by Southern California Edison Company (SCE) as a result of the Calico Solar Project." Ex. 300 (SSA) at C.2-117. On August 4, 2010, Staff also docketed Exhibit 304, which provides additional detailed information supplementing and explaining potential project-related actions that may lead to the impacts discussed in the SSA.

Because the 67-mile Pisgah Substation to Lugo Substation corridor involves the potential for significant impacts, the SSA appropriately focuses primary attention upon providing information regarding this corridor. Not all information is known or can be known at this time. Staff is unable to provide detailed information about the corridor or the other improvements that may be required because subsequent decisions must be made by SCE and the CPUC.[2] Transcript, Meyer Testimony, August 4, 2010, at 261; Transcript, Hesters Testimony, August 4, 2010, at 249. Staff does not know the location of 10 miles of the future ROW between Pisgah and Lugo, Transcript, Hesters Testimony, August 4, 2010, at 249, and the Commission does not have authority to determine that route. Neither Staff nor the Applicant is in a position to provide detailed information regarding alternative routes that BLM or the CPUC may consider. *Id.*

---

[2] As explained by Mr. Hesters, Staff assumes that some upgrades that will be utilized by the Project will be built prior to commencement of the Project, and does so as a practice because it avoids sheer speculation regarding which of many projects in the "queue" will come to fruition. Transcript, Hesters Testimony, August 4, 2010, at 243-44.

Interveners contend that a more detailed description of the transmission line than is found in the SSA is required. Staff has responded: "The SCE upgrades are a reasonably foreseeable event if the Calico Solar Project is approved and constructed as proposed, and are discussed in the SSA based on available information. As a separate project under another agency's jurisdiction, the SCE upgrades will also be the subject of a more detailed CEQA analysis in the future, based on a more specific project description [than] is now available." Ex. 300 (SSA) at C.2-164. Staff is correct. "Adoption of an EIR need not be interminably delayed to include results of works in progress which might shed some additional light on the subject." *Towards Responsibility in Planning v. City Council*, 200 Cal. App. 3d 671, 681 (1988). Where an EIR addresses information available at the time, "CEQA requires nothing more." *Id.* Detailed speculation regarding what CPUC might do is an exercise that CEQA does not require. *See No Oil, Inc. v. City of Los Angeles*, 196 Cal. App. 3d 223, 234 (1987); *National Parks & Conservation Ass'n v. County of Riverside*, 42 Cal. App. 4th 1505, 1518-19 (1996). It is abundantly clear that Staff has made a good faith effort to "find out and disclose all that it reasonably can." 14 Cal. Code. Regs. § 15144; *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*, 40 Cal. 4th 412, 428 (2007).[3]

The soundness of Staff's approach is common sense, and is also demonstrated by *No Oil, Inc. v. City of Los Angeles*, 196 Cal. App. 3d 223, 234 (1987). There, petitioners argued that a project that allowed oil drilling in certain areas of Los Angeles, and that allowed pipelines to transport the oil, required an EIR "to fully analyze the location, extent, and environmental impacts of ... contemplated pipeline routes." *Id.* The EIR discussed the pipeline's impacts, but discussed the location of the pipeline in only

---

[3] Some of the testimony regarding impacts that the Commission should consider has been particularly pointless. CURE's witness, David Marcus, made much of the fact that the location of the Pisgah Substation may change. Transcript, Marcus Testimony, August 4, 2010, at 240. Yet in his prepared testimony he quotes *the SSA's statement* that the proposed project involves the Pisgah Substation "at a new location." Ex. 400 (Marcus Opening Testimony) at 3.

general terms because more specific information was not known. *Id.* The petitioners argued that the failure to provide more specific information improperly fragmented the project and deferred consideration of the impacts, but the Court of Appeal rejected all of these arguments. *Id.* at 235, 237. As here, the EIR had sufficient detail to consider the types of impacts that would occur. *Id.* at 237. Also as here, the court noted that a more detailed environmental consideration of specific sites would be the responsibility of another public body. *Id.*

No Oil is directly on point. Interveners have complained about the level of detail in the SSA, and asserted that significant impacts have not been mitigated by the Commission, but they fail to even mention that it is the CPUC that would have permitting authority for the SCE transmission and telecommunications upgrades. Ex. 300 (SSA) at C.2-124; *see National Parks & Conservation Ass'n v. County of Riverside,* 42 Cal. App. 4th 1505, 1518 (1996) (statutory scheme that divided consideration of waste treatment and landfills rendered it appropriate for activities to be considered separate but related projects). These impacts will be considered by the CPUC, which has authority to mitigate them. For the purposes of this environmental analysis, to the extent feasible, Staff has appropriately identified the types of impacts that may occur, and has identified the types of mitigation measures that may be available for the CPUC to mitigate these impacts. Ex. 300 (SSA) at C.2-124 – C.2-126; *see* Pub. Res. Code § 21081(a)(2); 14 Cal. Code Regs. § 15091(a)(2). As the SSA notes, any such mitigation will require the input of SCE.

Finally, and most fundamentally, nothing is concealed in the SSA's description of the likely impacts. While the SSA does not endeavor to analyze impacts at the level of detail that the CPUC may consider later, when the transmission line details have been refined, the SSA concludes "that the upgrades could adversely impact sensitive biological resources in and/or adjacent to the transmission line and telecomm corridors and substation sites." Ex. 300 (SSA) at C.2-126. The Commission has been informed of the environmental impacts of its decision. *See* 14 Cal. Code. Regs. § 15151 ("An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes

account of environmental consequences."). The SSA is therefore adequate. *National Parks & Conservation Ass'n,* 42 Cal. App. 4th at 1520.

IV. BIOLOGICAL MITIGATION SHOULD BE TAILORED TO PROJECT IMPACTS

The record amply demonstrates that the Project's biological impacts have been adequately analyzed and that those impacts will be fully mitigated under the types of conditions conceptually proposed by Staff in the SSA. However, it is imperative that the mitigation measures be both proportional to the impacts under CEQA, and that the scope of the measures be realistic and grounded in a reasonable basis in the record. The Applicant requests modifications to several of Staff's proposed Conditions so as to ensure that the conditions are feasible and proportional to the Project's impacts, as described below.

A. All Impacts To The Desert Tortoise Have Been Analyzed And Will Be Fully Mitigated.

1. The Scope Of Impacts To The Desert Tortoise Is Well Characterized Based On Extensive On-Site Surveys And Surveys Of Proposed Translocation Areas.

There is general agreement between Staff, the Applicant, BLM, USFWS, and CDFG that the quality of desert tortoise habitat on the site varies, with the highest quality habitat found in the northern portion of the site and lowest quality habitat in the south. There is also agreement that the extensive site assessments completed by the Applicant's consultants, including 100% surveys of the site involving some 335 days and 3,334 km of transects, provides adequate information to assess the impact. Thus, even as there is disagreement about the level of mitigation required, there is consensus about the impact.

It is important to note that the Project site has been significantly reduced in land area to avoid much of the highest quality Desert Tortoise habitat in the original project area by pulling the project boundary 4,000 feet back from the foot of the Cady Mountains. Ex. 300 (SSA) at C.2-75; Transcript, Bellows Testimony, August 5, 2010, at 82. The

avoided habitat, the upper bajada areas, features the "more complex topography [that] provides for better foraging and soils for burrowing than found on the southern portions of the site," which is isolated by the highway and railroad, has been subject to disturbance from pipeline development, and provides little long-term value to the species. SSA C.2-76; *see also id.* at C.2-71 & C.2-76. The avoided areas have tortoise densities approximately 20% higher than recovery unit average density. Ex. 93 (Translocation Plan) at 2-4 & 1-4, tbl. 2. Thus, the changes in the Project greatly reduce the impacts to the high-quality habitat.

The reduction in the Project site also significantly reduces potential impacts to Desert Tortoise movement corridors. Based on concerns expressed by the DTRO, USFWS and CDFG, the project boundary was pulled back from the Cady Mountains to preserve east-west connectivity through the high quality habitat. Ex. 73 (Rebuttal Testimony of Patrick Mock) at 3. Generally, at the site "[m]ovement in the east-west direction is currently unconstrained. The primary constraints to wildlife movement are in the north-south direction." Ex. 44 (BLM, Biological Assessment, April 1, 2010) at 3-3; *see also id* at 4-2.[4] The reduced project footprint was designed to "significantly reduce impact to the desert tortoise and will allow for the preservation of a movement corridor. This movement corridor was designed specifically to [be] consistent with criteria provided by the Desert Tortoise Recovery Office." Ex. 87 (Rebuttal Testimony of Patrick Mock) at 3. Since the Project has been modified to preserve existing east-west potential migration corridors, especially where the bulk of the tortoise population in the vicinity of the Project is located (along the base of the Cady Mountains), the Applicant agrees with Staff that "impacts to connectivity, including genetic connectivity, with incorporation of staff's recommended conditions of certification, would be less than significant." Ex. 300 (SSA), at C.2-160; *see also* Ex. 55 (Desert Tortoise Survey Results) Figure 2.

---

[4] In the north-south direction, the movement corridor is already constrained by the presence of the BNSF railroad and the fenced I-40 roadway, and few tortoises are

(Footnote Continued on Next Page.)

The assessment includes consideration of impacts to the relocated tortoises, as well as impacts to recipient and host populations at the translocation sites. With respect to these impacts, there is also agreement. Although only 57 tortoise were identified during surveys of the site, Staff, the Applicant, BLM, USFWS, and CDFG all agree that there has been an adequate assessment of the impact that would result if no more than 98 tortoises are translocated to the identified and studied sites, namely in the Pisgah ACEC and a portion of the Ord-Rodman Mountains DWMA. The impacts associated with translocating no more than 98 Desert Tortoise to these areas has been fully analyzed and the analysis takes into account the impacts on the translocated individuals as well as the recipient and host populations in the identified translocation sites. To ensure that no additional impacts occur, Staff included in BIO-16 a provision that precludes the translocation of more than 98 Desert Tortoise. In the unexpected event that more than 98 tortoise are discovered on the Project site, the Applicant must provide information regarding additional translocation sites and the additional sites must be approved by the CPM in consultation with the BLM, USFWS and CDFG. This condition will ensure that any additional translocation sites necessary meet the performance standards included in the approved Desert Tortoise Translocation Plan, which require that tortoises can only be translocated to appropriate habitat with a sufficient carrying capacity to support them. As was discussed at the August 18th hearing, it is impossible to know in advance exactly how many tortoises will be found and translocated. The estimates provided in the SSA and the Applicant's testimony are based on formulas that provide approximations. The number may be lower or higher. It is, therefore, reasonable and appropriate for the Commission to approve the Project with the conditions proposed by Staff and to determine that such conditions ensure that all authorized impacts will be fully mitigated.

(Footnote Continued from Previous Page.)

found in the area. Ex. 44 (BLM, Biological Assessment, April 1, 2010) at 3-3, 4-2; *see also* Ex. 55 (Desert Tortoise Survey Results) fig. 2; Ex. 300 (SSA) at C.2-33.

2. The Desert Tortoise Translocation Plan Will Ensure That Adverse Effects To Desert Tortoise Are Avoided, Minimized, And Fully Mitigated.

The Applicant's biological consultants have been working closely for months with representatives of the USFWS, CDFG and BLM to prepare a Desert Tortoise Translocation Plan[5] that will ensure that impacts to Desert Tortoise are avoided and minimized to the extent practicable, and that unavoidable impacts are fully mitigated. Transcript, Miller Testimony, August 5, 2010, at 43.[6] The Translocation Plan is a carefully crafted program that employs best practices in order to find the "most appropriate suitable habitat and the most appropriate methods for translocation of the tortoise" in accordance with criteria promulgated by the Desert Tortoise Recovery Office (DTRO). Transcript, Miller Testimony, August 5, 2010, at 43; *see also* Ex. 93 (Translocation Plan) at 2-1.

The Translocation Plan identifies key recipient areas using DTRO mapping methodologies. Ex. 93 (Translocation Plan) at 2-3; Transcript, Miller Testimony, August 5, 2010, at 49. In identifying these areas, the Translocation Plan focuses on contiguous areas with better habitat, populations of similar genetic composition, and moderate densities. *See, e.g.,* Translocation Plan at 2-3; Transcript, Miller Testimony, August 5, 2010, at 49-51. The key recipient areas include the Pisgah ACEC, the Ord-

---

[5] The Desert Tortoise Translocation Plan was docketed with the Commission on August 4, 2010, and offered as evidence by Ms. Miller on August 5, 2010. The submission of the Plan is sufficiently timely to permit ample public comment before any final CEQA findings are made. As a Certified Regulatory Program, the CEC Siting Process is exempt from Chapters 3 and 4, and § 21167 of CEQA, which includes much of the procedures pertaining to EIRs. Pub. Res. Code § 21080.5. Written documentation must be provided "in a manner that will provide the public ... with sufficient time to review and comment on the filing." Pub. Res. Code § 21080.5(d)(2)(E)&(F). The Proposed Decision, which is the first CEC document to contain formal "CEQA findings," 20 Cal. Code Regs. § 1752.5, is subject to a 30-day comment period, 20 Cal. Code Regs. § 1749(b). Since the Translocation Plan has been circulated far in advance of the 30-day public notice and comment period required by the CEC regulations, the public availability requirements have been met.

[6] Ms. Miller has also provided a Declaration, filed herewith, that responds to the questions posed by the Committee regarding desert tortoise.

Rodman Desert Wildlife Management Area and the linkage area between the Project and the Cady Mountains. Transcript, Miller Testimony, August 5, 2010, at 49-50. The selection of recipient sites within these areas is based on data from surveys with 100% coverage of the entire area of the Pisgah ACEC, parts of the Ord-Rodman Wildlife Management Area, and the linkage area within the 1,000-foot buffer of the project, as well as control areas to the northwest of the project. *Id.* at 50-51.

The Translocation Plan carefully analyzes the existing density of tortoises, the habitat value of the site, and the location of roads and foreseeable energy projects. Ex. 93 (Translocation Plan) at 2-1 to 2-4; Transcript, Otahal Testimony, August 18, 2010, at 331–32; Transcript, Blackford Testimony, August 18, 2010, at 336–39; Transcript, Miller Testimony, August 5, 2010, at 48. The minimum requirement for a translocation area is an area that is of equal or better quality than the area from which the tortoise came. Transcript Miller Testimony, August 5, 2010, at 48, 58. Using USGS models, habitat quality is determined using a variety of metrics, including soils and vegetative cover. *Id.* at 48. Priority is also placed on finding sites as close to the Project site as possible. *Id.*

Within receiving sites, careful attention is given to avoiding impacts to the receiving population by not increasing the population above "the carrying capacity or the density of the translocation areas by more than 30 percent of the existing density." *Id.* at 58-59. Using agency protocols, the density in high quality habitat may not exceed the average density in the translocation area as a whole (estimated at 4.7 tortoises/km^2) by more than 130% (6.0 tortoises/km^2). Translocation Plan at 2-4.

The Translocation Plan provides for the translocation of the affected tortoises before construction "to avoid or minimize impacts to desert tortoise." Ex. 300 (SSA) at C.2-211 (BIO-15). Relocating these individuals immediately before disturbing the site (rather than many months earlier, during the site approval process) is a key prerequisite to the avoidance and minimization measures in Conditions BIO-1 through BIO-9. *Id.* at C.2-211 – C.2-213; *see also* Ex. 300 (SSA) at C.2-44, C.2-215.

To prevent the spread of disease, testing will be done at the time of relocation. Ex. 93 (Translocation Plan), at 2-8 – 2-13. Surveyors already conducted visual health

assessments and visual measurements of the tortoises and took as much data as could be determined by a visual collection without touching the tortoise. Transcript, Miller Testimony, August 5, 2010, at 36. Due to the fact that the surveyors had no authority to touch the tortoises, surveyors did not conduct disease testing. Prior to translocation, both translocated animals and receptor populations will be tested. Translocated animals will not be released within 2.5km of a diseased animal. Transcript Otahal Testimony, August 5, 2010, at 331–32; Translocation Plan at 2-11; Transcript, Blackford Testimony, August 18, 2010, at 339–340. Similarly, animals moved more than 500m will also be tested to prevent disease transmission out of the Project site. Transcript Miller Testimony, August 5, 2010, at 60; Transcript, Otahal Testimony, August 5, 2010, at 331–32. Translocated tortoises will be fitted with radiotelemetry transmitters and followed for a five-year monitoring period. Transcript, Miller Testimony, August 5, 2010, at 61. For every tortoise moved, a resident tortoise and a control tortoise will also be fitted with tags and monitored. *Id.*

The Translocation Plan utilizes an adaptive management approach with respect to the uncertainties inherent in estimating the actual population of the Project site. While the Applicant believes that the USFWS protocol calculation represents the best estimate and urges the Commission to impose conditions on that basis, CDFG suggested at recent hearings that the actual number of individuals requiring translocation may be higher and that the need for relocation sites may be greater than the translocation plan currently provides. Transcript, Moore Testimony, August 18, 2010, at 267-68. CDFG applied the protocol formula differently than the other experts did, but concurred in the soundness of the basic approach. *Id.* at 322. While the current relocation plan has sufficient sites for the expected number of tortoises, there are also ample additional potential recipient sites. Transcript, Otahal Testimony, August 18, 2010, at 279.

The Translocation Plan's adaptive management strategy, takes into account that the number of tortoises may be higher or lower. *Id.* at 280–81. As noted, regardless of the method used for estimation, the actual number of tortoises at the recipient site will not change. *Id.* In the event that the translocation area needs to be increased because more tortoises are found than have been anticipated, additional sites will be utilized.

The only issue this presents is that USFWS may need to reinitiate consultation on the extended relocation areas. Transcript, Blackford Testimony, August 18, 2010, at 290. Thus, the Translocation Plan will fully mitigate impacts through the use of a scientifically grounded and carefully crafted program that is responsive to the actual conditions of the tortoise population. *See Envt'l Council of Sacramento. v. City of Sacramento*, 142 Cal. App. 4th 1018, 1043 (2006) (holding that a scientifically grounded adaptive management plan may fully mitigate species impacts).

3. The required mitigation must be proportional to the level of impacts and must be feasible.

CEQA requires the Commission to impose feasible, effective mitigation measures to reduce or avoid significant impacts; these mitigation measures must also be proportional to the impacts the Project will generate. *Environmental Council of Sacramento v. City of Sacramento,* 142 Cal. App. 4th 1018, 1040 (2006) ("Mitigation measures must be roughly proportional to the impacts caused by the project.").

The CEQA Guidelines expressly provide that

> [m]itigation measures must be consistent with all applicable constitutional requirements, including the following: (A) There must be an essential nexus (i.e. connection) between the mitigation measure and a legitimate governmental interest. *Nollan v. California Coastal Commission,* 483 U.S. 825 (1987); and (B) The mitigation measure must be "roughly proportional" to the impacts of the project. *Dolan v. City of Tigard,* 512 U.S. 374 (1994). Where the mitigation measure is an ad hoc exaction, it must be "roughly proportional" to the impacts of the project. *Ehrlich v. City of Culver City,* 12 Cal.4th 854 (1996).

14 Cal. Code Regs. § 15126.4(a)(4); *see also* 14 Cal. Code Regs. § 15041(a). Mitigation pursuant to CESA must also be roughly proportional to the impact. Cal. Fish & Game Code § 2080(b)(2); see *Environmental Protection Info. Ctr. v. Cal. Dept. of Forestry*, 4 Cal.4th 459, 511 (2008).

To ensure proportionality between required mitigation and Project impacts, the Commission should take account of the quality and functionality of resources impacted

by the Project and must avoid duplicative or ineffective mitigation. It also should phase mitigation payments to better correspond to the timing of impacts and avoid imposing duplicative and disproportionate payments for long-term maintenance.

Just as the existing condition of resources – the environmental baseline – is relevant in evaluating the significance of impacts under CEQA, so too must it be considered when determining the proper scope of mitigation under CEQA. *County of Amador v. El Dorado County Water Agency,* 76 Cal. App. 4th 931, 954 (1999) ("analysis of impacts, mitigation measures and project alternatives" are impossible without considering baseline). Therefore, in determining the amount of compensatory mitigation for biological impacts, the Commission must account for the quality and functionality of the habitat or resource that will be impacted by the Project. *Environmental Council of Sacramento,* 142 Cal. App. 4th at 1040. Furthermore, under CEC regulations, the proponent of particular conditions must make a reasonable showing regarding the feasibility of the condition, and the conditions must be based on evidence in the record. 20 Cal. Code Regs. § 1748(e) & 1751(a).

a. The excessive mitigation ratios suggested by CDFG are unprecedented and will not be proportionate to the impacts unless modified.

At the time of the issuance of the SSA, the Applicant and Staff agreed that impacts to Desert Tortoise should be mitigated at a 3:1 ratio for impacts to high quality habitat and a 1:1 ratio for impacts to lower quality habitat. SSA at C.2-75 to C.2-78; Transcript, Bellows Testimony, August 5, 2010, at 82. As the SSA notes, CDFG typically requires 1:1 mitigation, and may impose a 3:1 requirement for higher quality habitat that "reflects the limits to increases in carrying capacity that can be achieved on the acquired lands.... *Depending on the quality of habitat that is lost and the habitat conditions of the land that is acquired*, it is difficult to sufficiently increase the carrying capacity of the acquisition lands to completely offset habitat loss without relying on additional acreage to boost the numbers of desert tortoise that can be supported on the mitigation lands." Ex. 300 (SSA) at C.2-77 (emphasis added).

At the August 18th hearing, the Applicant learned for the first time that CDFG had recently determined that a higher level of mitigation would be required for 1,971 acres at the northernmost end of the Project. For these areas, CDFG suggested that a 5:1 compensation ratio would be necessary to ensure full mitigation. The evidence on which this recommendation is based is unclear, but it appears that CDFG is assuming that the mitigation lands will be of substantially lower quality than these high-quality areas of the Project site. The record does not suggest this is the case. Although the Project area supports higher than average tortoise densities, the 3:1 ratio takes this fact into account. As noted by Staff, the 3:1 mitigation ratio for the area of higher quality habitat "is consistent with past Energy Commission mitigation requirements for projects with impacts to desert tortoise (for example, High Desert Power Plant Project and the Victorville 2 Hybrid Power Project), as well as Staff's recommended mitigation as stated in the Final Staff Assessment for the Beacon Solar Energy Project and the Ivanpah Solar Energy Generating Station, and with Incidental Take Permits issued by CDFG for other non-Energy Commission jurisdiction projects in the region." *Id.* at C.2-76. The Ivanpah site also supports "high quality habitat for this species, with low levels of disturbance and high plant species diversity." The Ivanpah site in fact supports a higher density of tortoises than the Project site, but the ratios required were nevertheless 3:1. Final Staff Assessment/Draft Environmental Impact Statement, Ivanpah Solar Electricity Generating System, Docket Number 07-AFC-05, November 4, 2009, at 6.2-29; Presiding Member's Proposed Decision, Ivanpah Solar Electricity Generating System, Docket Number 07-AFC-05, August 3, 2010, at 21. Requiring a markedly higher mitigation ratio implies that the high quality habitat affected by the Project is exceptional, and that the offset acreage would be of poor quality. It implies that this project is different from other similar projects. Absolutely nothing indicates this is the case.

The Applicant agrees that the habitat on the northern end of the project site is of high quality. Transcript, Miller Testimony, August 5, 2010, at 39. However, this area has previously been considered *together with all of the area north of the tracks*. Not all of the area north of the tracks is of high quality. *Id.* Imposing a 5:1 mitigation ratio for the northern end of the project would require a reevaluation of the mitigation ratios for the other land north of the tracks to maintain proportionate mitigation. While the Applicant

is prepared to make a proposal to implement the 5:1 mitigation ratio with appropriate adjustments to the other mitigation ratios north of the tracks, the Applicant also believes the 5:1 mitigation is absolutely unnecessary based on the record. *See Environmental Council of Sacramento*, 142 Cal. App. 4th at 1040 (overall mitigation ratio should take into account underlying variation in impacts).

b. The calculation of compensatory mitigation fees must have a reasonable basis.

Regardless of the mitigation ratios used to derive the compensatory mitigation requirements, the costs associated with the mitigation program must have a reasonable basis in the actual costs of land mitigation. The estimates of the fees required to provide for this mitigation in the SSA are not well grounded in the record. First, based on historical records of land purchases, land may be purchased for mitigation for a cost much closer to $500 per acre than the $1,000 an acre cited by Staff. Transcript, Bellows Testimony, August 5, 2010, at 85, Ex. 300 (SSA) at C.2-78. Whereas the Applicant's testimony is based on evidence of actual property values, Staff's estimate is based on speculation that costs will be double because of "a likely jump in land costs due to demand, and an 18-24 month window to acquire the land after agency decisions are made." Ex. 300 (SSA) at C.2-81 n.2. Staff fails to provide a basis for its estimates and acknowledges that the "actual costs may vary." *Id.* at C.2-78. *See* Transcript Bellows Testimony, August 5, 2010, at 85. Based on discussions with Staff and agency representatives at the Conditions Workshop held on August 10, 2010, the Applicant understands that the $500 per acre number provided by the Applicant is consistent with BLM's updated assessment of the projected cost and that Staff is seeking confirmation of this number from its sister agencies. The Applicant requests that the Commission utilize the $500 per acre number.

The mitigation table provided in the SSA includes an assumption that the parcels obtained would, on average, include 40 acres. A number of the cost estimates are based on the number of parcels acquired. Given the size of parcels in the Project area as well as the fact that one of the goals of the compensatory mitigation is to acquire large blocks of lands, BLM reported at the August 10th Conditions Workshop that it was

reasonable to assume that the parcels acquired as mitigation for the Project would have an average size of 640 acres. The Applicant requests that the Commission utilize this parcel size in determining mitigation funding requirements.

Finally, the SSA mitigation estimates assume that it will cost $1,450 per acre for the long term management of the compensation lands. There is no evidence in the record that supports this estimate. Based on the Applicant's consultants' estimates regarding the required level of management required on the compensation lands, the Applicant asks that the Commission reduce this number to $692. Declaration of Patrick Mock filed herewith, ¶ 3.

B. Bighorn Sheep

The Applicant supports the conclusions of Staff that the Project's impacts to the Bighorn Sheep are not significant with mitigation. Since Nelson's Bighorn Sheep do not permanently occupy the site, the primary concerns are to foraging habitat and movement corridors. As noted in the SSA, the only sign of sheep detected during the various surveys and helicopter survey of the site were found in the upper bajada area between the new northern boundary of the site and the Cady Mountains, where there is spring browsing habitat. SSA at C2.-40 & C.2-160 – 161. As noted by Staff, this means that "the project design as analyzed in this SSA substantially reduces impacts to seasonal foraging habitat and wildlife movement on the upper bajada, north of the project boundary.... [Also], project impacts to habitat connectivity and wildlife movement would be less than significant with incorporation of staff's recommended mitigation." SSA at C.2-160 - 161. Direct effects to Nelson's bighorn sheep would include the loss of approximately 1,078 acres of spring foraging habitat, and potential indirect noise effects around the northern project boundary. SSA at C.2-5. The avoidance and minimization measures in Conditions of Certification BIO-23 will reduce these impacts.

C. Cumulative Impacts To The Mojave Fringe-Toed Lizard Should Not Be Considered Significant.

Staff concludes in the SSA that there will be a cumulatively considerable contribution to a cumulative impact to the Mojave Fringe-Toed Lizard (MFTL) because of "a residual adverse impact" after mitigation, "including a net loss of habitat and interruption of suitable east-west movement habitat." SSA C.2-4. Staff's conclusion regarding a loss of connectivity ignores the nature of the location. "The MFTL habitat onsite occurs between the railroad and Interstate highway and is isolated by these linear features from other habitat areas occupied by this species." Ex. 73 (Mock Prepared Testimony), at 5; Transcript, Mock Testimony, August 5, 2010, at 250-51, 256. Staff's conclusion also fails to consider the small acreage at issue and the large amount of land that the federal government is already conserving for the MFTL. By Staff's own estimate, there are only 21.4 acres of good quality habitat for the MFTL onsite, and Staff generates 143.3 more acres only by using substantial buffer areas. SSA C.2-36. Meanwhile, conservation areas in the general vicinity preserve around 57,000 acres. Transcript, Mock Testimony, August 5, 2010, at 251. Accordingly, the 3:1 mitigation ratio proposed for Mojave Fringe-Toed Lizard is adequate to mitigate cumulative impacts to a level that is less than significant. Ex. 73 (Mock Prepared Testimony), at 6.

D. Compensatory Mitigation For Burrowing Owls Is Not Warranted

Proposed conditions BIO-17 and BIO-21 provide for adequate minimization and avoidance measures for the burrowing owl and provide off-site burrowing owl habitat to compensate for onsite loss. SSA at C.2-4. However, the additional compensatory mitigation proposed in BIO-21 is not appropriate. Transcript, Mock Testimony, August 5, 2010, at 253-254; Ex. 82-A (Applicant's Comments and Proposed Changes to Calico Solar Project Conditions of Certification). The compensation requirement is not justified because the burrowing owl is not a listed species and the level of risk to the species is not severe. *Id.* There will be no incidental take of this species because there will be appropriate removal from the site. *Id.* Moreover, since the SA was published, the direct

impacts to the species have diminished because the area where most of the sightings have occurred has since been excluded from the Project area. *Id.* at 254. Therefore, the justification for this compensation provision is even further reduced.

E. Condition BIO-12 (Special-Status Plant Impact Avoidance And Minimization), With The Applicant's Proposed Revisions, Will Mitigate The Project's Impacts To Special-Status Plants To A Less-Than-Significant Level

The SSA identifies significant Project impacts to one special-status plant, the white-margined beardtongue, and calls for avoidance of the beardtongues on the Project site. SSA at C.2-60 – C.2-63; Condition BIO-12(A). The SSA also identifies the potential for other, later-blooming, special-status plants to be present on the site, and calls for late-season 2010 botanical surveys to search for such plants, and, if they are detected, requires measures to mitigate impacts to them. SSA at C.2-60 – C.2-63; Condition BIO-12(B) – (D). The Applicant agrees with these conclusions, but has requested revisions to Condition BIO-12 to ensure that the mitigation measures are clear and feasible.

With regard to the white-margined beardtongue, Condition BIO-12(A)(f) appears to require both quarterly and annual monitoring of the preserved beardtongue area; the Applicant requests that the quarterly monitoring be deleted as it is unnecessary. More importantly, the Applicant requests deletion of Conditions BIO-12(A)(i) and (k), requiring the Applicant to conduct beardtongue propagation research and off-site weed monitoring and management. The Applicant does not object to preserving and protecting the beardtongues on the Project site. The seven mitigation measures designed to accomplish that preservation and protection (BIO-12(A)(a through g)) will ensure that the Project's impacts to the beardtongue will be mitigated. To require the Applicant to fund scientific research and off-site mitigation unrelated to the Project's impacts is excessive and unreasonable.

In the event that additional special-status plants are discovered in the late-season surveys, Staff has proposed detailed mitigation measures. (Condition BIO-12(C) and

(D).) The Applicant does not object to these measures except on three points. First, the seed collection mitigation should be revised to acknowledge that seed collection may not be feasible given the timing of construction of Phase 1a and 1b in relation to the late-season surveys. Second, in the event that additional special-status plants are discovered and off-site mitigation is required, the mitigation lands should be "nested" in the mitigation lands required under Conditions BIO-13 and BIO-17, unless it is determined that the lands to be acquired under Conditions BIO-13 and BIO-17 will not satisfy requirements for special-status plant mitigation lands. Finally, the Applicant requests a timing clarification to Condition BIO-12(D)(II)(7). See Appendix A.

V. THE EVIDENCE SHOWS THAT THE PROJECT'S IMPACTS TO ARCHAEOLOGICAL RESOURCES ARE NOT SIGNIFICANT

Following thousands of hours of on-site investigation and the highest-level study (Class III) that BLM conducts, the experts at URS, LSA, and the BLM concluded that the Project would cause no significant impacts to archaeological resources and no effect to historic properties. The experts further concluded that all significant archaeological resources are located within the 2,000-acre area that will be avoided by the Project's reduction in size from 8,230 acres to 6,215 acres. Ex. 75 (Prepared Testimony of Rachael Nixon) Answers 4-7; Calico Solar Project FEIS at 4-217 – 4-218; Transcript, Hunter Statement, August 18, 2010, at 433-434, 446. On August 9, 2010, the SSA drew a contrary conclusion, based on the premise that no significance determination can be made regarding archaeological resources without subterranean investigation. SSA Part II at C.2-1[7] As the conclusion of the other experts demonstrates, and as will be explained further at the August 25, 2010 hearing, Staff's conclusion is erroneous. The Commission should adopt the conclusion of the experts who spent considerable time on the site and in evaluating information about the site's archaeological resources

---

[7] Nothing in CEQA states or implies that subterranean investigation is required in order to assess impacts to archaeological resources. *See Society for California Archaeology v. County of Butte*, 65 Cal. App. 3d 832, 838 (1977) (holding that, where archaeological

(Footnote Continued on Next Page.)

that the Project's impacts on archaeological resources will be less than significant as a result of avoidance.

At the August 18, 2010 hearing, CEC and BLM staff discussed their progress in negotiating an agreement to address their difference of opinion in a timeframe that would allow the Project to proceed. BLM has designated the off-site resources as National Register-eligible. Transcript, Hunter Statement and Shearer Statement, August 18, 2010, at 434, 457. The concept of the agreement would be that if it is demonstrated that the off-site resources are a representative sample of the same types of resources identified on the Project site, then no on-site subterranean investigation would be required. Transcript, McGuirt Testimony, August 18, 2010, at 419-20. The Applicant urges Staff and BLM to reach agreement.

In the event that the Commission does not agree with the experts who investigated the site and concluded that the Project's impacts will be less than significant, and in the event that Staff and BLM are unable to reach agreement regarding the adequacy of the investigation of the off-site resources to demonstrate the Project's impacts, Staff has indicated that it will insist on subterranean investigations on the Project site. Staff has proposed Condition CUL-4 to implement the subterranean investigations. Condition CUL-4 as presented in the SSA would be infeasible and many are unnecessary given the level of analysis that has been completed. *See* Appendix A. The Applicant and Staff have discussed CUL-4 and have agreed on some revisions, but remain in disagreement on two key points: the extent of sampling that would be required and the timing of the subterranean investigation in relation to Project construction. The Applicant submits that if subterranean investigation is to be required – for resources already determined by the experts to be ineligible for listing – the sampling effort should not be extensive and that the 25% sample effort proposed by Staff is far too high. Second, the 150-day and 120-day timing provisions in the Verification section of CUL-4

(Footnote Continued from Previous Page.)

survey was conducted, excavation was not necessarily required).

are infeasible for a Project that must break ground in October 2010 given the Desert Tortoise clearance surveys necessary. The Applicant has proposed much shorter timeframes, which would require both the Applicant and Staff to work on an expedited schedule if Condition CUL-4 is adopted. The Applicant requests that if the Commission adopts Condition CUL-4, it include the Applicant's proposed revisions on these two points.[8]

VI. WITH IMPLEMENTATION OF CONDITION SOIL&WATER-8, THE PROJECT'S EROSION AND FLOODING IMPACTS WILL BE LESS THAN SIGNIFICANT

At the August 6, 2010 hearing, the Applicant's witnesses and Commission Staff expressed somewhat different views on the extent to which the Applicant's plans for detention basins had changed over the months preceding the hearing, and whether the state of the Project design was sufficient for Staff to conclude that the Project would cause no significant flooding or erosion impacts. The Applicant's witnesses testified that the evidence showed the Project would not significantly change drainage patterns or cause significant erosion impacts (Transcript, Byall and Moore Testimony, August 6, 2010, at 5, 19); Staff testified that they were not yet convinced. During the hearing, however, the Applicant agreed to Staff's proposed Condition of Certification SOIL&WATER-8. Transcript, Gannon Statement, August 6, 2010, at 49.

Staff's expert stated that this Condition will "protect the Project from ... flood hazards resulting from the hundred-year storm while allowing pass-through of flows resulting from smaller storms to replenish sediment in channels allowing groundwater recharges along the drainages which will maintain the function of the desert washes." Transcript, Weaver Testimony, August 6, 2010, at 47-48. Therefore, Staff concluded that with this

---

[8] In other respects, the Applicant believes either that the Applicant and Staff have agreed on language or that remaining areas of disagreement can be resolved. *See* Appendix A. The Applicant also notes that if the Commission agrees the archaeological resources impact is less than significant, or Staff and BLM agree that the off-site resources adequately represent the on-site resources, then the reference to CUL-4 in

(Footnote Continued on Next Page.)

Condition, the Project's impacts to potential impacts to erosion and flooding will not be significant. Transcript, Holmes Statement, August 6, 2010, at 69.

CURE's witness, Dr. Poff, suggested that both the Applicant's and the Staff's experts were mistaken. He testified that the Project's disturbance of cryptobiotic crusts and, especially, desert pavement, would be permanent and would increase erosion from the Project site. Transcript, Poff Testimony, August 6, 2010, at 54-59. He further testified that the standard National **[SCI]** Resource Conservation Service model used by the Applicant's expert to calculate the Project's erosion potential had recently been found, by a committee of which he was a member, to be inadequate because it did not adequately address the crusts and the desert pavement. *Id.* at 57-58; *compare* Transcript, Moore Testimony, August 6, 2010, at 18-20 (describing methodology Applicant's expert used). Dr. Poff did not identify any model other than the NRCS model for the Project to use. Transcript, Poff Testimony, August 6, 2010, at 54-59. Dr. Poff also pointed to a 1960s-era road as an example of the effects of disturbance of desert pavement, but then admitted that, unlike the Calico Project, the road was built at a time when storm water runoff and erosion control measures were not done. *Id.* at 62.

The Commission is entitled to decide which experts to rely upon. Here, both the Applicant's expert and the Staff expert have concluded, based on substantial evidence, that with mitigation, the Project will not cause a significant flooding or erosion impact. The contrary testimony of CURE's witness does not negate the conclusions of the other experts.

VII. THE WATER SUPPLY IS RELIABLE

The Applicant proposes to obtain groundwater from Well #3, which was recently drilled on a NAP parcel that is surrounded by the Project. Ex. 56 (Applicant's Supplement to

---

(Footnote Continued from Previous Page.)

Condition CUL-5(2) should be deleted. *See id.* The Applicant also proposes changes to Condition CUL-6 regarding mitigation for identified impacts to Route-66. *Id.*

the Calico Solar (formerly Solar One) Application for Certification) May 14, 2010 ("Supplement to AFC"), Appendix B; SSA at page C.7-12. This well draws from the Lavic Lake groundwater basin that underlies the Project. *Id.* The basin is 159 square miles, is estimated at 270,000 acre feet of storage, and is recharged from rainfall at a rate of an estimated 200 to 400 acre feet per year (AFY). Ex. 84 (Prepared Rebuttal Testimony of Robert Scott) ("Scott Rebuttal Testimony") at 1; SSA at C.7-12 & C.7-29 to 30 ("the upper end of the recharge range is considered more likely.").

The Calico well (Well #3) is the only currently active well in the entire basin. SSA at C.7-30 The project demand that will be served by this well is estimated to average 136 AFY during construction, and 20 AFY during operations. Transcript, Robert Scott Testimony, August 6, 2010, at 73. The Project, accordingly, embodies one of the most water-efficient energy production technologies available. Ex. 63 (Prepared Direct Testimony of Felicia Bellows) at 7; SSA at C.7-61 (noting that a wet-cooled parabolic trough plant would consume 300 times more water than the Calico plant). In fact, the County has expressed support of the Project's technology precisely because it uses so little water. Transcript, August 6, 2010, Planning Commissioner Blewett Testimony, August 6, 2010, at 65-66 ("this project I'm particularly fond of because I like their technology, because, of course, water is always a major issue up here in our high desert.").

With only 20 AFY of long-term operational demand and 200 – 400 AFY of recharge to the Lavic basin, the basin is more than sufficient to supply the Project. The Applicant's testing of Well #3 confirmed that the well is a reliable supply for the Project. The Applicant performed a 24-hour pumping test on Well #3, which is the standard test for municipal water supply wells. Testing was conducted at 100 gallons per minute (gpm). Ex. 84 (Prepared Rebuttal Testimony of Robert Scott) ("Scott Rebuttal Testimony") at 2. The 100 gpm testing corresponds to a yield of 160 AFY; the 20 AFY needed for long-term operation corresponds to only 12.5 gpm, *id.* at 2; Transcript, Scott Testimony, August 6, 2010, at 73, while the construction needs are only 83 gpm (approximately 133 AFY). Transcript, Liles Testimony, August 6, 2010, at 82.

Even at 100 gpm, the water level dropped only 6.6 feet in the first minute of the test, then remained stable for the duration of the test. Water levels recovered almost immediately after testing stopped. This indicates a highly transmissive aquifer, and there were no boundary conditions observed during the pumping. Ex. 84 (Scott Rebuttal Testimony) at 1-2; Transcript, Scott Testimony, August 6, 2010 at 71-72; Transcript, Liles Testimony August 6, 2010, at 80; Ex. 56 (Supplement to AFC), Appendix B. Also, the water column in the well is approximately 800 feet thick, with more than 200 feet of this water column above the upper well screen. The 6.6-feet of drawdown therefore represent less than 1% of the total water column and approximately 3% of the water column available for drawdown. By contrast, municipal production wells typically operate with drawdown that is between 50% to 80% of the available water column. Ex. 84 (Scott Rebuttal Testimony) at 1–2; Transcript, Scott Testimony, August 6, 2010, at 71; Ex. 56 (Supplement to AFC) , Appendix B; Transcript, Liles Testimony, August 6, 2010, at 80–81. Also, the 200 feet of water that lies above the upper screen represents a substantial buffer to compensate for potential long-term pumping effects. Ex. 84 (Scott Rebuttal Testimony) at 1–2.

The Applicant's testing also confirmed that pumping from Well #3 would not affect any other wells. The Zone of Influence extends only 390 feet from the well for pumping at 150 AFY for a hypothetical 5-year construction period, and it extends only 353 feet after 30 years of pumping at the operational rate of 13 gpm (approximately 20 AFY). And, those effects do not account for any recharge to the basin. Ex. 56 (Supplement to AFC), Appendix B, § 5.2.4. Accordingly, the zone of influence would not extend past the Project boundaries.[9]

Accordingly, the water supply is reliable, and the analysis meets all the requirements of CEQA. *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova*,

---

[9] The Applicant has also identified an alternative supply: water from a well in the Cadiz area. Ex. 82 (Bellows Rebuttal Testimony) at 1–2. The Applicant and the CEC have studied the impacts of using such a well. Ex. 302 (Staff Assessment/Draft EIS) at C.7-31 to C.7-34 & C.7-37 to C.7-42.

40 Cal.4th 412, 432 (2007) (analysis of water supplies that "bear a likelihood of actually proving available" are sufficient; a "definitely assured water through signed, enforceable agreements with a provider and already built or approved treatment and delivery facilities" is not required).

VIII. SUBSTANTIAL EVIDENCE SUPPORTS STAFF'S ANALYSIS OF GLINT/GLARE AND CONDITION TRANS-7

SSA Part II includes an analysis of the potential for Project mirrors to cause glint and glare effects on BNSF train crews, including the potential for glint and glare to prevent the crews from seeing the BNSF signal at Hector Road. SSA Part II at C.11-18 – C.11-19 & Appendix A. The analysis concludes that without mitigation, the Project's potential glint and glare impact on train crews would be potentially significant. *Id.* at C.11-1. In Condition TRANS-7, Staff identified detailed mitigation measures to reduce this impact to less-than-significant. These measures include requiring the Applicant to work with BNSF "to ensure that the operation of the SunCatcher mirrors will not interfere with the railroad engineers' ability to accurately see and respond to appropriate signal lights," to shield and increase the brightness of the BNSF signals, and to modify the operation of the SunCatchers to minimize glint and glare. *Id.* at C.11-36 – C.11-39. These detailed measures are supported by substantial evidence, and the Applicant does not object to them.

BNSF has objected to Condition TRANS-7 and asserts that the Commission must adopt a Condition of Certification that imposes no objective standards, but instead defers solely to BNSF's desires. BNSF demands the following condition:

> Prior to the first SunCatcher disc being mounted on a pedestal, a site-specific Glare/Glint study shall be performed at Calico Solar's expense to address the Glare/Glint issues raised by BNSF with respect to the potential impact of the proposed Calico Solar SunCatchers on BNSF rail operations. The recommended mitigation measures shall be reviewed by BNSF. If BNSF approves the recommended

> mitigation measures, they will be implemented by Calico Solar at its expense. The site specific study shall commence immediately upon BNSF's selection of the experts to perform the study.

Ex. 1203 (Prepared Direct Testimony of Joseph Schnell) at 9-10.

Whereas Condition TRANS-7 would create an objective performance standard for the Applicant to meet ("ensure that the operation of the SunCatcher mirrors will not interfere with the railroad engineers' ability to accurately see and respond to appropriate signal lights"), BNSF's proposed language creates no standard other than "whatever BNSF decides." The Applicant recognizes that the Project requires a new right-of-way agreement between BNSF and itself, and that in that negotiation, BNSF may seek whatever terms it wishes. There is no basis, however, for BNSF to attempt to impose its terms on the Commission by way of Conditions of Certification. BNSF's proposed language envisions no role whatsoever for the Commission, but rather demands that the Commission tell the Applicant to do whatever BNSF wants. The Applicant respectfully submits that this is not the Commission's role.

Because Condition TRANS-7 includes both a performance standard and specific mitigation measures, it is superior to BNSF's proposed substitute. However, the Applicant would not object to the adoption of BNSF's proposed substitute language if it were modified to include some Commission oversight as follows: Prior to the first SunCatcher disc being mounted on a pedestal, a site-specific Glare/Glint study shall be performed at Calico Solar's expense to address the Glare/Glint issues raised by BNSF with respect to the potential impact of the proposed Calico Solar SunCatchers on BNSF rail operations. <u>If an impact to BNSF rail operations is identified, the Glare/Glint study will include mitigation measures to address any such impact.</u> The recommended mitigation measures shall be reviewed by BNSF. If BNSF <u>the CPM, in consultation with the BNSF</u>, approves the recommended mitigation measures, they will be implemented by Calico Solar at its expense. The site specific study shall commence immediately upon BNSF's selection of the experts to perform the study.

IX. THE APPLICANT HAS PROVIDED THE REQUESTED SPECIFICS OF THE PROJECT'S HYDROGEN SYSTEMS AND DOES NOT OBJECT TO STAFF'S REVISIONS TO CONDITION WORKER SAFETY-6

At the August 6, 2010 hearing, Staff requested additional information regarding the layout of the hydrogen systems for the Project. The Applicant docketed the requested information on August 10, 2010.[10] Staff then prepared the Second Errata to the Supplemental Staff Assessment. Energy Commission Staff's Second Errata to the Supplemental Staff Assessment for the Calico Solar Project (hereinafter "SSA Second Errata"), August 17, 2010. In the SSA Second Errata, Staff states that it has evaluated the Applicant's additional information about the hydrogen systems. Based on that evaluation, Staff provides additional testimony regarding solar field access and proposes changes to Condition of Certification WORKER SAFETY-6 concerning secondary access. *Id.* at 140. With one timing modification, the Applicant agrees to the changes proposed by Staff. *See* Appendix A. These changes add yet another layer of safety to the Project and further reinforce Staff's conclusion that the Project will not cause significant impacts with respect to hazardous materials or worker safety and fire protection.

X. THE APPLICANT'S COMPENSATORY MITIGATION OBLIGATIONS SHOULD BE PHASED TO BETTER REFLECT WHEN IMPACTS ARE EXPECTED TO OCCUR

The Applicant requests that the Commission's mitigation program include milestones so that the compensatory mitigation payments for biological impacts will be paid in advance of – but in proportion to – impacts from development of the Project as they occur. *See Environmental Council of Sacramento v. City of Sacramento*, 142 Cal. App. 4th 1018, 1040 (2006) ("Mitigation measures must be roughly proportional to the impacts caused by the project."); *see* 14 Cal. Code Regs. § 15126.4 (citing *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987) and *Dolan v. City of Tigard*, 512

---

[10] The additional information is attached to the Declaration of Felicia Bellows filed with this Brief. The Applicant will request that the Declaration and attached information be entered into evidence at the hearing in this proceeding.

U.S. 374 (1994)). This approach preserves the feasibility of the Project and is most consistent with CEQA's and the U.S. Constitution's requirements for proportionality between mitigation and impacts. This phasing is entirely consistent with the requirements of CESA, which only requires that a finding that mitigation will be adequately funded be based on substantial evidence. *See Environmental Council of Sacramento v. City of Sacramento*, 142 Cal. App. 4th 1018, 1044 (2006) (upholding CESA mitigation fees that would only be prospectively imposed on developers). Moreover, such phased mitigation has been expressly endorsed by the Commission in other recent proceedings.

A. Mitigation Must Be Phased To Ensure It Remains Feasible.

Only feasible mitigation can properly be required under CEQA. Pub. Res. Code § 21002.1(b). "Feasible," under CEQA, is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Pub. Res. Code § 21061.1; 14 Cal. Code Regs. § 15364; *see also* 20 Cal. Code Regs. § 1723.5(d) (mitigation proposed should be "available to the applicant"). Mitigation that renders the entire project economically infeasible is by definition itself infeasible under CEQA. *See Foundation for San Francisco's Architectural Heritage v. City and County of San Francisco*, 106 Cal. App. 3d 893, 912-13 (1980) (mitigation proposals that render the project economically infeasible are not required).

As currently drafted, the mitigation security required just by BIO-17 is $50,295,164.23. SSA at C.2-221. It is not feasible to provide financial guarantees of this magnitude prior to construction. The Applicant is seeking a Treasury grant under the American Recovery and Reinvestment Act of 2009 and loan guarantees through the Department of Energy's (DOE) Loan Guarantee Program. Ex. 82, at 9 (Prepared Bellows Testimony). The DOE's program is critical to the Project, as commercial financial markets largely have been closed to new and innovative technologies like the Applicant's since the financial crisis began in late 2008. *Id.* at 8-9. To qualify for the Treasury grant, construction must commence this year. Yet, as Ms. Bellows testified,

"[d]elays in the Loan Guarantee process ... . are creating the potential that the Loan Guarantee process will not be complete, and the project will not have reached financial close until the first quarter of 2011 at the earliest." *Id.* The combination of the rapidly-approaching Treasury grant deadline and delayed loan guarantee schedule will place the Applicant in a financial squeeze late this year, as it will be forced to rely on sponsor equity alone to begin construction and fund any mitigation costs. *Id.* As Ms. Bellows has stated: "While Tessera Solar has sufficient equity to initiate construction and provide part of the mitigation funding, on its own, it does not have sufficient funds to begin construction and fund the entirety of the mitigation costs until project financing is completed." *Id.* at 9.

At the same time as it protects the Project's feasibility, phased mitigation comes at no environmental cost. The Applicant is proposing to base the security payments required for each phase of the Project to the actual level of impact to the resources that will occur. Therefore for Phase 1a, the Applicant is proposing to provide security in an amount which is sufficient to ensure that the 250 acres of Desert Tortoise habitat will be fully mitigated. The security will be provided prior to ground breaking for Phase 1a. This security will also ensure that impacts to special status plan species and waters of the state will be mitigated because it is reasonable to assume that the Desert Tortoise mitigation lands will also mitigate these impacts. No mitigation for impacts to Mojave fringe toed lizard will be required until Phase 2 because neither Phase 1a or 1b will impact this species. The calculated mitigation fees for each phase are as follows:

Proposed Security Phasing				
	Phase 1a	Phase 1b	Phase 2	Total
Special Status Plants (BIO-12)	Included as nested mitigation **	Included as nested mitigation **	Included as nested mitigation **	N/A

MFTL Mitigation (BIO-13)	-0- (No MFTL habitat will be impacted)	-0- (No MFTL habitat will be impacted)	May be included as nested mitigation, ** but if not: $381,215	$381,215 *
Desert Tortoise Mitigation (BIO-17) ***	$1,268,078 (providing 250 acres of mitigation)	$10,186,260 * (providing 2077 acres of mitigation)	$12,071,151 * (providing 3,888 acres of mitigation)	$23,525,489 *
Waters of the State (BIO-26)	Included as nested mitigation **	Included as nested mitigation **	Included as nested mitigation **	
Totals	$1,268,078	$10,186,260	$12,452,366	$23,906,704

* Less adjustments for land acquisition method, habitat enhancement actions, long-term management costs and land improvement costs.

** Assumes that special status plant species and waters of the State mitigation will be nested with MFTL and desert tortoise mitigation. If desert tortoise mitigation lands to not meet criteria of BIO-12, BIO-13 and/or BIO-26 additional security will be required.

*** Desert Tortoise mitigation numbers are based on the mitigation ratios described in the SSA and the Staff's Second Errata to the SSA.

The Commission's conditions are enforceable. Pub. Res. Code §§ 25534, 25900. Thus, conditions that include the milestones described above would ensure that mitigation is in place before impacts occur, which is all that CEQA requires.

B. Phasing Mitigation To Better Correspond With The Timing Of Impacts Most Faithfully Implements CEQA.

A fee imposed at a later date is not the same as a fee immediately imposed, due to the time value of money, and due to the deprivation of use of the money. Given the amounts of money at issue in the mitigation, the difference between the immediate fee and the phased fee is substantial. Phasing mitigation to correspond with the timing of impacts reflects the requirement that mitigation be proportionate to impacts.

The timing of mitigation measures is commonly tied to various development milestones to ensure that mitigation is implemented at the most appropriate time under CEQA. *See* Kostka & Zischke, *Practice Under the California Environmental Quality Act,* Continuing Education of the Bar (2d ed. 2010 Update) § 18.10 (noting that public agencies should "be able to tailor a monitoring or reporting program" for mitigation measures "to the development timetable of the project"). Mitigation programs that require various measures to be implemented at various stages of development of a Project – just as the Applicant proposes with its phased mitigation program – are perfectly consistent with CEQA. *Christward Ministry v. County of San Diego*, 13 Cal. App. 4th 21, 48 (1993) (upholding program requiring different elements of mitigation to be implemented at various stages such as "prior to initiation of grading, construction and operation" and "during the grading and construction phase of the project"); *see also* 14 Cal. Code Regs. § 15097(c); Kostka & Zischke, *Practice Under the California Environmental Quality Act* § 18.10.

The phased mitigation program proposed by the Applicant is no different than a program of enforceable commitments to perform certain mitigation measures in the future, which has long been held to be appropriate under CEQA. *See Defend the Bay v. City of Irvine,* 119 Cal. App. 4th 1261, 1277 (2004) (commitment to future mitigation based on a triggering event was proper); *Save Our Peninsula Committee v. Monterey County Board of Supervisors,* 87 Cal. App. 4th 99, 141 (2001) (CEQA does not require "that the EIR set forth a time-specific schedule" for mitigation. "All that is required by CEQA is that there be a reasonable plan for mitigation."). Similarly, the fact that mitigation may properly be scaled and timed according to a set of performance standards necessarily means that phased implementation of already established mitigation measures is likewise appropriate. *See Gentry v. City of Murrieta,* 36 Cal. App. 4th 1359, 1395 (1995) (adopting specific standards to be imposed on future phases of a project is appropriate approach to mitigation); *Gray v County of Madera,* 167 Cal. App. 4th 1099, 1126 (upholding deferral of design of exterior lighting system subject to performance standards until after facility is built and light placement can be more effectively determined); *Laurel Heights Improvement Ass'n v Regents of Univ. of Cal.,* 47 Cal. 3d 376, 418 (1988) (upholding mitigation measure for noise impacts that

required evaluation of specific noise control techniques to ensure compliance with noise performance standards once ventilation system had been designed).

C. The Commission Has Endorsed Similarly Phased Mitigation Programs In Other Proceedings.

This Commission has itself approved phased approaches to mitigation payments like the one proposed here by the Applicant. The Calico Project is entitled to a similarly well-tailored program that takes into account the timing of expected impacts in determining when mitigation payments must be made.

In October 2000, the Commission incorporated phased payments for a $7 million mitigation obligation into the conditions of certification for the Moss Landing Power Plant Project. Cal. Energy Commission Decision, Application for Certification, Moss Landing Power Plant Project, Docket No. 99-AFC-4 (Oct. 25, 2000) at 194. The Commission's certification required the applicant to fund a watershed acquisition and enhancement program. Payment toward this mitigation obligation was divided into seven parts. The first payment of $1.5 million was due within 120 days after construction began on new power generation units. The next two payments of $750,000 each were scheduled for the respective dates of commercial operation of two such units. The fourth and fifth payments were for $1 million each and were due one year after the respective commercial operation dates. Finally, the sixth and seventh payments, also for $1 million each, were due two years from the start of commercial operation for each respective unit. *Id.*

In February 2005, the Commission approved phased mitigation for the El Segundo Power Redevelopment Project. Cal. Energy Commission Decision, Application for Certification, El Segundo Power Redevelopment Project, Docket No. 00-AFC-14 (Feb. 2, 2005) at 66-67. The project owner was required to place $5 million in trust for a third-party group "to assess the ecological condition of the Santa Monica Bay and to develop and implement actions to improve the ecological health of the Bay." *Id.* at 66. The total funding obligation was divided into two categories: $1 million that would be paid first, subject to a pre-established schedule; and $4 million to be paid under a

payment schedule that would be devised later. The initial payment toward the first $1 million was due thirty days after the Commission's decision became final and was for $250,000. Every 90 days thereafter, an additional $250,000 was due until $1 million had been contributed in total. Then, under the condition of certification, the third-party group in consultation with the applicant would propose a schedule to govern payment of the remaining funds ($4 million). *Id.*

In 2004, the Commission approved a condition of certification for the Morro Bay Power Plant Project that deferred altogether until a later date the determination of when mitigation payments would be due. *See* Cal. Energy Commission 3d Rev. PMPD, Application for Certification, Morro Bay Power Plant Project, Docket No. 00-AFC-12 (June 15, 2004) at 323-24 (final decision unavailable online). A biological condition of certification required the project owner to "provide payment for a habitat enhancement program." *Id.* at 323. The condition left "the amount and timing" of payment to subsequent identification in the project's National Pollutant Discharge Elimination System (NPDES) permit. *Id.* Regardless, therefore, of what the NPDES permit ultimately provided, the Commission here sanctioned postponing mitigation payments and opened the door to a phased approach to mitigation.

The Moss Landing, El Segundo, and Morro Bay plants all had significant environmental impacts requiring mitigation payments comparable in magnitude to the Project. The same reasons that prompt the Applicant to request phased mitigation – protection of Project feasibility and preservation of proportionality between mitigation and impacts – certainly applied to these projects as well. The Commission's previous decisions demonstrate that these circumstances justify the tailored, phased mitigation program that the Applicant proposes.

XI. CONDITIONS

Appendix A includes all of the conditions of certification for the Project with revision marks showing Applicant's proposed changes. Following the August 4th-6th and 18th Evidentiary Hearings and the August 10th Conditions Workshop, Staff and the Applicant have reached agreement on several of these conditions and hope to resolve more of

these conditions at the August 24th Workshop. Many of these unresolved conditions involve only timing issues; the Applicant has requested, and the Staff has generally supported, timing revisions both to allow the Project to break ground in 2010 and to tie mitigation to the timing of when impacts would occur. The few areas of substantial disagreement are explained in the appropriate sections of this brief.

XII. THE PROJECT'S BENEFITS SUPPORT AN OVERRIDE OF SIGNIFICANT AND UNAVOIDABLE IMPACTS

The Staff and the Applicant have each identified certain environmental impacts of the Project that they believe will remain significant despite the imposition of all feasible mitigation measures.[11]

Staff believes that the Project's impacts to cultural resources, land use conversion and visual resources, and its cumulative impacts to these resources and fringe-toed horned lizards, will be significant even with all feasible mitigation incorporated. For reasons it has explained, the Applicant disagrees the Project's impacts to cultural resources and cumulative impacts to FTHL will be significant and unavoidable. However, the Applicant

---

[11] Staff initially found a potential issue with compliance with the BLM's Instruction Memorandum regarding management of donated land and lands acquired by Land and Water Conservation Funds (LWCF), dated May 28, 2009. Ex. 300 (SSA) at C.8-1. Staff has since testified that it is proper for the Commission to defer to the BLM with respect to compliance with this policy. Transcript, Vahidi Testimony, August 4, 2010, at 130. BLM has found that the avoidance in the agency preferred alternative complies with this policy. See FEIS, Appendix G at G.27. Staff notes:

> The Agency Preferred Alternative is configured to avoid surface disturbances to some of the donated and acquired lands within the project site. It also is configured to avoid potential impacts to biological resources. The north boundary of the project footprint has been redesigned to avoid 1,770 acres of habitat for desert tortoises, bighorn sheep and rare plants. And, within the project boundary there are 6.65 acres of environmentally sensitive areas which would exclude project development to protect rare plants.

Id.

agrees that the Project will cause the other significant unavoidable impacts identified by Staff and, therefore, that in order to approve the Project, the Commission must find that its significant unavoidable impacts are outweighed by its benefits, and override the significant impacts. 20 CCR § 1755 (environmental findings in final decision). The Project's benefits amply support such an override.[12]

Each of the benefits identified below provides a separate and independent basis for overriding the significant environmental effects of the Project. The benefits of the Project are as follows:

a. Provision of Renewable Energy

The Project will provide clean, renewable, solar-powered electricity and assist Southern California Edison (SCE) in meeting its legislatively mandated obligations under the RPS program. When fully operational, the Project will provide approximately 11% of SCE's Renewable Portfolio Standard requirement. Ex. 64 (Opening Testimony of Sean Gallagher (hereinafter "Gallagher Opening Testimony") at 2. Ex. 300 (SSA) at C5-1. The Applicant has a power purchase agreement with SCE, approved by the California Public Utilities Commission, to purchase power from this Project. Ex. 64 (Gallagher Opening Testimony) at 2.

---

[12] Although the Applicant believes the Calico Project complies with all applicable laws, ordinances, regulations and standards, in the event that the Commission determines that the Calico Project does not comply with a law, ordinance, regulation, or standard, according to Section 1752(k) of the California Code of Regulations, the Commission must make "...findings and conclusions on whether the noncompliance can be corrected or eliminated; and if such noncompliance cannot be corrected, findings on both the following:

> (1) Whether the facility is required for public convenience and necessity; and
> (2) Whether there are no more prudent and feasible means of achieving such public convenience and necessity.

Again the Applicant believes that the benefits identified below and the lack of suitable alternative sites allow the Commission to make these two findings.

b. Reduction of Greenhouse Gas Emissions

The Project will also assist SCE and the State of California in reducing greenhouse gas emissions as required by the California Global Warming Solutions Act (AB 32). It will assist the State in meeting the related targets in Executive Order S-14-08. It will also reduce criteria air emissions by displacing fossil fuel based electricity generation. Ex. 64 (Gallagher Opening Testimony) at 2; Ex. 300 (SSA) at ES-37. Moreover, as noted by Staff, "[b]oth State and Federal law support the increased use of renewable energy and any resultant decreases in the use of riskier hazardous materials for power production at other facilities." Ex. 300 (SSA) at ES-37.

As part of larger state, national and global strategies, reductions in greenhouse gas emissions from this Project will have long-term secondary biological, social and economic benefits. Ex. 64 (Gallagher Opening Testimony),at 3-4; Ex. 300 (SSA) at ES-37 – ES-38 (noting that the Project would emit less toxic air contaminants while also providing much needed electrical power to California residences and business and contributing to electric reliability).

c. Displacement of Generation from Coastal Power Plants That Use Once-Through Cooling

The Project will contribute to the Water Resources Control Board's goal of phasing out once-through cooling (OTC) in California's 19 coastal power plants in order to reduce impacts on marine life. Ex. 64 (Gallagher Opening Testimony), at 3. The Project will contribute to this effort by providing power to SCE and becoming available to displace power currently generated by power plants in the SCE service territory that use OTC technology.

d. Source of Jobs Locally, Regionally and Nationwide

The Project will be funded with support of the American Recovery and Reinvestment Act of 2009 and is part of the national program to "create new jobs and save existing ones" and to "spur economic activity and invest in long-term growth." *Id.* In total the Project will create approximately 640 construction jobs, 180, operation jobs, and

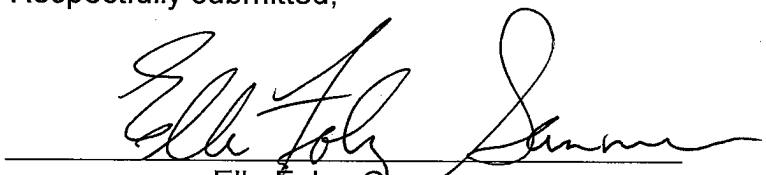
additional indirect and induced jobs for the local area and at manufacturing centers around the country. The Applicant concurs with Staff that permanent jobs and wages are a "[n]oteworthy socioeconomic public benefit" of the Calico Project. Ex. 300 (SSA) at ES-38.

XIII. CONCLUSION

The Calico Project is reliable and designed to minimize impacts to the environment. It can be feasibly pursued with modification of the conditions as noted above and in Exhibit A. The Project is well-designed, and will go a long way toward helping California meet its RPS goal. The few significant environmental impacts that remain after substantial revisions of the Project should be overridden, and certification of the Project should be granted.

Date: August 23, 2010

Respectfully submitted,



Ella Foley Gannon
Attorneys for Applicant
Calico Solar LLC

A/73466617.4

APPENDIX A

CALICO CONDITIONS AS REVISED BY APPLICANT

This Page Intentionally Left Blank

<APPENDIX A>

<CALICO CONDITIONS AS REVISED BY APPLICANT>

AQ-SC1 Air Quality Construction Mitigation Manager (AQCMM): The project owner shall designate and retain an on-site AQCMM who shall be responsible for directing and documenting compliance with Conditions of Certification **AQ-SC3, AQ-SC4** and **AQ-SC5** for the entire project site and linear facility construction. The on-site AQCMM may delegate responsibilities to one or more AQCMM Delegates. The AQCMM and AQCMM Delegates shall have full access to all areas of construction on the project site and linear facilities, and shall have the authority to stop any or all construction activities as warranted by applicable construction mitigation conditions. The AQCMM and AQCMM Delegates may have other responsibilities in addition to those described in this condition. The AQCMM shall not be terminated without written consent of the Compliance Project Manager (CPM).

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 on-site AQCMM and all AQCMM Delegates.

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.

AQ-SC3 Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each Monthly Compliance Report that demonstrates compliance with the Air Quality Construction Mitigation Plan (AQCMP) mitigation measures for the purposes of minimizing fugitive dust emission creation from construction activities and preventing all fugitive dust plumes that would not comply with the performance standards identified in **AQ-SC4** from leaving the project site. The following fugitive dust mitigation measures shall be included in the Air Quality Construction Mitigation Plan (AQCMP) required by **AQ-SC2,** and any deviation from the AQCMP mitigation measures shall require prior CPM notification and approval.

a. The main access roads through the facility to the power block areas will be either paved or stabilized using soil binders, or equivalent methods, to provide a stabilized surface that is similar for the purposes of dust control to paving, that may or may not include a crushed rock (gravel or similar

material with fines removed) top layer, prior to initiating construction in the main power block area, and delivery areas for operations materials (chemicals, replacement parts, etc.) will be paved or treated prior to taking initial deliveries.

b. All unpaved construction roads and unpaved operation and maintenance site roads, as they are being constructed, shall be stabilized with a non-toxic soil stabilizer or soil weighting agent that can be determined to be both as efficient or more efficient for fugitive dust control as ARB approved soil stabilizers, and shall not increase any other environmental impacts including loss of vegetation to areas beyond where the soil stabilizers are being applied for dust control. All other disturbed areas in the project and linear construction sites shall be watered as frequently as necessary during grading (consistent with BIO-7); and after active construction activities shall be stabilized with a non-toxic soil stabilizer or soil weighting agent, or alternative approved soil stabilizing methods, in order to comply with the dust mitigation objectives of Condition of Certification AQ-SC4. The frequency of watering can be reduced or eliminated during periods of precipitation.

c. No vehicle shall exceed 10 miles per hour on unpaved areas within the construction site, with the exception that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions.

d. Visible speed limit signs shall be posted at the construction site entrances.

e. All construction equipment vehicle tires shall be inspected and washed as necessary to be cleaned free of dirt prior to entering paved roadways.

f. Gravel ramps of at least 20 feet in length must be provided at the tire washing/cleaning station.

g. All unpaved exits from the construction site shall be graveled or treated to prevent track-out to public roadways.

h. All construction vehicles shall enter the construction site through the treated entrance roadways, unless an alternative route has been submitted to and approved by the CPM.

i. Construction areas adjacent to any paved roadway below the grade of the surrounding construction area or otherwise directly impacted by sediment from site drainage shall be provided with sandbags or other equivalently effective measures to prevent run-off to roadways, or other similar run-off control measures as specified in the Storm Water Pollution Prevention Plan (SWPPP), only when such SWPPP measures are necessary so that this condition does not conflict with the requirements of the SWPPP.

j. All paved roads within the construction site shall be swept daily or as needed (less during periods of precipitation) on days when construction activity occurs to prevent the accumulation of dirt and debris.

k. At least the first 500 feet of any paved public roadway exiting the construction site or exiting other unpaved roads en route from the construction site or construction staging areas shall be swept as needed (less during periods of precipitation) on days when construction activity occurs or on any other day when dirt or runoff resulting from the construction site activities is visible on the public paved roadways.

l. All soil storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or shall be treated with appropriate dust suppressant compounds.

m. All vehicles that are used to transport solid bulk material on public roadways and that have potential to cause visible emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to provide at least 2 feet 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.

Verification: 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.

AQ-SC4 Dust Plume Response Requirement: The AQCMM or an AQCMM Delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported (A) off the project site and within 400 feet upwind of any regularly occupied structures not owned by the project owner or (B) 200 feet beyond the centerline of the construction of linear facilities indicate that existing mitigation measures are not resulting in effective mitigation. The AQCMP shall include a section detailing how the additional mitigation measures will be accomplished within the time limits specified. The AQCMM or Delegate shall implement the following procedures for additional mitigation measures in the event that such visible dust plumes are observed:

Step 1: The AQCMM or Delegate shall direct more intensive application of the existing mitigation methods within 15 minutes of making such a determination.

Step 2: The AQCMM or Delegate shall direct implementation of additional methods of dust suppression if Step 1, specified above, fails to result in adequate mitigation within 30 minutes of the original determination.

Step 3: The AQCMM or Delegate shall direct a temporary shutdown of the activity causing the emissions if Step 2, specified above, fails to result in effective mitigation within one hour of the original determination. The activity shall not restart until the AQCMM or Delegate is satisfied that appropriate additional mitigation or other site conditions have changed so that visual dust plumes will not result upon restarting the shutdown source. The owner/operator may appeal to the CPM any directive from the AQCMM or Delegate to shut down an activity, if the shutdown shall go into effect within one hour of the original determination, unless overruled by the CPM before that time.

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 Air Quality Construction Mitigation Plan (AQCMP) required by **AQ-SC2,** and any deviation from the following mitigation measures shall require prior CPM notification and approval.

a. All diesel-fueled engines used in the construction of the facility shall have clearly visible tags issued by the on-site AQCMM showing that the engine meets the conditions set forth herein.

b. All construction diesel engines with a rating of 50 hp or higher shall meet, at a minimum, the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines, as specified in California Code of

Regulations, Title 13, section 2423(b)(1), unless a good faith effort to the satisfaction of the CPM that is certified by the on-site AQCMM demonstrates that such engine is not available for a particular item of equipment. In the event that a Tier 3 engine is not available for any off-road equipment larger than 50 hp, that equipment shall be equipped with a Tier 2 engine, or an engine that is equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides (NOx) and diesel particulate matter (DPM) to no more than Tier 2 levels unless certified by engine manufacturers or the on-site AQCMM that the use of such devices is not practical for specific engine types. For purposes of this condition, the use of such devices is "not practical" for the following, as well as other, reasons.

1. There is no available retrofit control device that has been verified by either the California Air Resources Board or U.S. Environmental Protection Agency to control the engine in question to Tier 2 equivalent emission levels and the highest level of available control using retrofit or Tier 1 engines is being used for the engine in question; or

2. The construction equipment is intended to be on site for 10 days or less.

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 question meeting the controls required in item "b" occurs within 10 days of termination of the use, if the equipment would be needed to continue working at this site for more than 15 days after the use of the retrofit control device is terminated, if one of the following conditions exists:

1. The use of the retrofit control device is excessively reducing the normal availability of the construction equipment due to increased down time for maintenance, and/or reduced power output due to an excessive increase in back pressure.

2. The retrofit control device is causing or is reasonably expected to cause engine damage.

3. The retrofit control device is causing or is reasonably expected to cause a substantial risk to workers or the public.

4. Any other seriously detrimental cause which has the approval of the CPM prior to implementation of the termination.

d. All heavy earth-moving equipment and heavy duty construction-related trucks with engines meeting the requirements of (b) above shall be properly maintained and the engines tuned to the engine manufacturer's specifications.

e. All diesel heavy construction equipment shall not idle for more than 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 on site during that month, including the owner of that equipment and a letter from each owner indicating that equipment has been properly maintained; and

C. Any other documentation deemed necessary by the CPM or AQCMM to verify compliance with this condition. Such information may be provided via electronic format or disk at the project owner's discretion.

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 U.S.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 on-site vehicle and equipment fleet and the vehicle and equipment purchase orders and contracts and/or purchase schedule. The plan shall be updated every other year and submitted in the Annual Compliance Report.

AQ-SC7 The project owner shall provide a site Operations Dust Control Plan, including all applicable fugitive dust control measures identified in the verification of **AQ-SC3** that would be applicable to minimizing fugitive dust emission creation from operation and maintenance activities and preventing all fugitive dust plumes that would not comply with the performance standards identified in **AQ-SC4** from leaving the project site; that:

A. describes the active operations and wind erosion control techniques such as windbreaks and chemical dust suppressants, including their ongoing maintenance procedures, that shall be used on areas that could be disturbed by vehicles or wind anywhere within the project boundaries; and

B. identifies the location of signs throughout the facility that will limit traveling on unpaved portion of roadways to solar equipment maintenance vehicles only. In addition, vehicle speed shall be limited to no more than 10 miles per hour on these unpaved roadways, with the exception that vehicles may travel up to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions.

The site operations fugitive dust control plan shall include the use of durable non-toxic soil stabilizers on all regularly used unpaved roads and disturbed off-road areas, or alternative methods for stabilizing disturbed off-road areas, within the project boundaries, and shall include the inspection and maintenance procedures that will be undertaken to ensure that the unpaved roads remain stabilized. The soil stabilizer used shall be a non-toxic soil stabilizer or soil weighting agent that can be determined to be either as efficient or more efficient for fugitive dust control as ARB approved soil stabilizers, and shall not increase any other environmental impacts including loss of vegetation to areas beyond where the soil stabilizers are being applied for dust control.

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 on-site 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 permit proposed by the District or U.S. Environmental Protection Agency (U.S. EPA), and any revised federal permit issued by the District or U.S. 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.

AQ-SC9 The project owner shall only use Tier 3 or higher certified engine generators, totaling no more than 900 horsepower, to provide project site power prior to the installation of utility construction or permanent electric power lines to the project site. These engines shall be in the range of 50 to 750 hp each and will have NOx emissions that are certified under full load to be no more than 3.5 grams per brake horsepower for engines between 50 and 100 horsepower and no more than 3.0 grams per brake horsepower for engines between 100 and 750 horsepower. This requirement does not include small engine generators that are solely dedicated to specific pieces of equipment, such as engine generators necessary for welders.

Verification: The project owner shall submit data on the site power generators at least 15 days prior to their use that demonstrates compliance with this condition.

C.1.13.2 DISTRICT CONDITIONS

DISTRICT FINAL DETERMINATION OF COMPLIANCE CONDITIONS (MDAQMD 2010a)

District conditions **AQ-1** through **AQ-15** are CEQA-only required conditions.

Application No. 00010423 (Emergency Generator)

EQUIPMENT DESCRIPTION:

ARB Certified Tier III engine, 399 bhp, fueled on ARB diesel, powering an electrical generator.

AQ-1 Engine may operate in response to notification of impending rotating outage if the area utility has ordered rotating outages in the area where the engine is located or expects to order such outages at a particular time, the engine is located in the area subject to the rotating outage, the engine is operated no more than 30 minutes prior to the forecasted outage, and the engine is shut down immediately after the utility advises that the outage is no longer imminent or in effect.

Verification: The project owner shall maintain engine operating records as required in **AQ-6** and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-2 This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 0.0015% (15 ppm) on a weight per weight basis per ARB Diesel or equivalent requirements.

Verification: The project owner shall maintain the fuel sulfur content records for diesel fuel deliveries on site as required in **AQ-6** and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-3 This equipment shall be installed, operated and maintained in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants. Unless otherwise noted, this equipment shall also be operated in accordance with all data and specifications submitted with the application for this permit.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-4 A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.

Verification: The project owner shall make the site available for inspection by representatives of the District, ARB, and the Energy Commission.

AQ-5 This unit shall be limited to use for emergency power, defined as in response to a fire or when commercially available power has been interrupted. In addition, this unit shall be operated no more than 50 hours per year, and no more than 0.5 hours per day for testing and maintenance, excluding compliance source testing. Time required for source testing will not be counted toward the 50 hour per year limit.

Verification: The project owner shall maintain engine use records on site as required in **AQ-6** and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-6 The project owner shall maintain an operations log for this unit current and on-site (or at a central location) for a minimum of five (5) years, and this log shall be provided to District, State and Federal personnel upon request. The log shall include, at a minimum, the information specified below:

a. Date of each use and duration of each use (in hours);

b. Reason for use (testing & maintenance, emergency, required emission testing);

c. Calendar year operation in terms of fuel consumption (in gallons) and total hours; and,

d. Fuel sulfur concentration (the project owner may use the supplier's certification of sulfur content if it is maintained as part of this log).

Verification: The project owner shall submit records required by this condition that demonstrating compliance with the sulfur content and engine use limitations of conditions **AQ-2** and **AQ-5** in the Annual Compliance Report including a photograph showing the annual reading of engine hours. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-7 This genset is subject to the requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115). In the event of conflict between these conditions and the ATCM, the more stringent requirements shall govern.

Verification: The project owner shall submit the engine specifications at least 30 days prior to purchasing the engines for review and approval demonstrating that the engines meet both ATCM and New Source Performance Standard (NSPS) subpart IIII emission limit requirements at the time of engine purchase. The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-8 This unit shall not be used to provide power during a voluntary agreed to power outage and/or power reduction initiated under an Interruptible Service Contract (ISC); Demand Response Program (DRP); Load Reduction Program (LRP) and/or similar arrangement(s) with the electrical power supplier.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

Application No. 00010422 (5,000 gallon Above Ground Non-Retail Gasoline Dispensing Facility)

EQUIPMENT DESCRIPTION:

5,000 gallon capacity gasoline tank with Phase I and Phase II vapor recovery.

AQ-9 The toll-free telephone number that must be posted is 1-800-635-4617.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-10 The project owner shall maintain a log of all inspections, repairs, and maintenance on equipment subject to Rule 461. Such logs or records shall be maintained at the facility for at least two (2) years and shall be available to the District upon request.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-11 Any modifications or changes to the piping or control fitting of the vapor recovery system require prior approval from the District.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-12 The vapor vent pipes are to be equipped with pressure relief valves.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-13 The project owner shall perform the following tests within 60 days of construction completion and annually thereafter in accord with the following test procedures:

a. Static Pressure Decay Test per ARB test method TP-201 .3B (2-inch test);

b. Dynamic Back Pressure test per TP-201 .4;

c. Liquid Removal Test (if applicable) per TP-201 .6;

d. Fuel dispensing rate not to exceed 10 gpm, verified per EO G-70-200-C Exhibit 4, and;

e. Emergency vents and manways shall be leak free when tested at the operating pressure of the tank in accordance with ARB test methods, as specified in Title 17, California Code of Regulations.

The District shall be notified a minimum of 10 days prior to performing the required tests with the final results submitted to the District within 30 days of completion of the tests.

The District shall receive passing test reports no later than six (6) weeks prior to the expiration date of this permit.

Verification: The project owner shall notify the District at least 10 days prior to performing the required tests. The test results shall be submitted to the District within 30 days of completion of the tests and shall be made available to the CPM if requested.

AQ-14 The annual throughput of gasoline shall not exceed 500,000 gallons per year. Throughput Records shall be kept on site and available to District personnel upon request. Before this annual throughput can be increased the facility may be required to submit to the District a site specific Health Risk Assessment in accord with a District approved plan. In addition public notice and/or comment period may be required.

Verification: The project owner shall submit to the CPM gasoline throughput records demonstrating compliance with this condition as part of the Annual Compliance Report. The project owner shall maintain on site the annual gasoline throughput records and shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

AQ-15 The project owner shall; install, maintain, and operate this equipment in compliance with ARB Executive Order G-70-200-C or Enhanced Vapor Recovery (EVR) Phase I and EVR Phase II, and Standing Loss requirements in affect at the time of construction.

Verification: The project owner shall make the site available for inspection of records by representatives of the District, ARB, and the Energy Commission.

DESIGNATED BIOLOGIST SELECTION[1]

BIO-1 The project owner shall assign at least one Designated Biologist to the project. The project owner shall submit the resume of the proposed Designated Biologist, with at least three references and contact information, to the Energy Commission Compliance Project Manager (CPM) and the Bureau of Land Management's (BLM's) Wildlife Biologist for approval in consultation with the California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS).

The Designated Biologist must meet the following minimum qualifications: Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;

1. 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;

2. Have at least one year of field experience with biological resources found in or near the project area;

3. Meet the current USFWS Authorized Biologist qualifications criteria (http://www.fws.gov/ventura/speciesinfo/protocols guidelines), demonstrate familiarity with protocols and guidelines for the desert tortoise, and be approved by the USFWS; and

4. Possess a California ESA Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise.

In lieu of the above requirements, the resume shall demonstrate to the satisfaction of BLM's Wildlife Biologist and the CPM, in consultation with CDFG and USFWS, that the proposed Designated Biologist or alternate has the appropriate training and background to effectively implement the conditions of certification.

Verification: No fewer than 30 days prior to construction-related ground disturbance, the Designated Biologist(s) shall complete a USFWS Desert Tortoise Authorized Biologist Request Form (http://www.fws.gov/ventura/speciesinfo/protocols guidelines) and submit it to the USFWS, BLM's Wildlife Biologist, and the CPM for review and final approval.

The project owner shall submit the resume of the Designated Biologist to the CPM and BLM within 7 days of receiving the Energy Commission Decision. No construction-related ground disturbance, grading, boring, or trenching shall commence until an approved Designated Biologist is available to be on site.

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to BLM's Wildlife Biologist and the CPM as soon as possible prior to the termination or release of the Designated Biologist. In an emergency, the project owner shall immediately notify the BLM's Wildlife Biologist and the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to BLM's Wildlife Biologist and the CPM and for consideration.

DESIGNATED BIOLOGIST DUTIES

BIO-2 The project owner shall ensure that the Designated Biologist performs the activities described below during any site mobilization activities, construction-related ground disturbance, grading, boring, or trenching activities. The Designated Biologist may be assisted by the approved Biological Monitor(s) but remains the contact for the project owner, BLM's Wildlife Biologist, and the CPM. The Designated Biologist Duties shall include the following:

1. Advise the project owner's Construction and Operation Managers on the implementation of the biological resources conditions of certification;

2. Consult on the preparation of the Biological Resources Mitigation Implementation and Monitoring Plan (BRM IMP) to be submitted by the project owner;

3. Be available to supervise, conduct, and coordinate mitigation, monitoring, and other biological resources compliance efforts, particularly in areas requiring avoidance or containing sensitive biological resources, such as special-status species or their habitat;

4. Clearly mark sensitive biological resource areas and inspect these areas at appropriate intervals for compliance with regulatory terms and conditions;

5. Inspect active construction areas where animals may have become trapped prior to construction commencing each day. At the end of the day, inspect for the installation of structures that prevent entrapment or allow escape during periods of construction inactivity. Periodically inspect areas with high vehicle activity (e.g., parking lots) for animals in harm's way;

6. Notify the project owner, the BLM's Wildlife Biologist and the CPM of any non-compliance with any biological resources condition of certification;

7. Respond directly to inquiries of BLM's Wildlife Biologist and the CPM regarding biological resource issues;

8. Maintain written records of the tasks specified above and those included in the BRMIMP. Summaries of these records shall be submitted in the

Monthly Compliance Report and the Annual Compliance Report to both the CPM and BLM Wildlife Biologist;

9. Train the Biological Monitors as appropriate, and ensure their familiarity with the BRMIMP, Worker Environmental Awareness Program (WEAP) training, and USFWS guidelines on desert tortoise surveys and handling procedures (http://www.fws.gov/ventura/speciesinfo/protocols guidelines); and

10. Maintain the ability to be in regular, direct communication with representatives of CDFG, USFWS, BLM's Wildlife Biologist , and the CPM, including notifying these agencies of dead or injured listed species and reporting special-status species observations to the California Natural Diversity Data Base.

Verification: The Designated Biologist shall provide copies of all written reports and summaries that document biological resources compliance activities in the Monthly Compliance Reports submitted to BLM's Wildlife Biologist and the CPM. If actions may affect biological resources during operation a Designated Biologist shall be available for monitoring and reporting. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report unless his or her duties cease, as approved by BLM's Wildlife Biologist and the CPM.

BIOLOGICAL MONITOR QUALIFICATIONS

BIO-3 The Designated Biologist shall submit the resume, at least three references, and contact information of each of the proposed Biological Monitors to BLM's Wildlife Biologist and the CPM. The resume shall demonstrate, to the satisfaction of the BLM's Wildlife Biologist and the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks. The Biological Monitor is the equivalent of the USFWS designated Desert Tortoise Monitor (USFWS 2008c).

Biological Monitor(s) training by the Designated Biologist shall include familiarity with the conditions of certification, BRM IMP, WEAP, and USFWS guidelines on desert tortoise surveys and handling procedures (http://www.fws.gov/ventura/speciesinfo/protocols guidelines).

Verification: The project owner shall submit the specified information to the BLM's Wildlife Biologist and the CPM for approval at least 30 days prior to the start of any site mobilization or construction-related ground disturbance, grading, boring, and trenching. The Designated Biologist shall submit a written statement to BLM's Wildlife Biologist and the CPM confirming that individual Biological Monitor(s) has been trained including the date when training was completed. If additional biological monitors are needed during construction, the specified information shall be submitted to BLM's Wildlife Biologist and the CPM for approval at least 10 days prior to their first day of monitoring activities.

BIOLOGICAL MONITOR DUTIES

BIO-4 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 Wildlife Biologist, and the CPM.

Verification: The Designated Biologist shall submit in the Monthly Compliance Report to BLM's Wildlife Biologist and the CPM and copies of all written reports and summaries that document biological resources compliance activities, including those conducted by Biological Monitors. If actions may affect biological resources during operation a Biological Monitor, under the supervision of the Designated Biologist, shall be available for monitoring and reporting. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report unless their duties cease, as approved by BLM's Wildlife Biologist and the CPM.

DESIGNATED BIOLOGIST AND BIOLOGICAL MONITOR AUTHORITY

BIO-5 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. The Designated Biologist shall have the authority to immediately stop any activity that is not in compliance with these conditions and/or order any reasonable measure to avoid take of an individual of a listed species. If required by the Designated Biologist and Biological Monitor(s), the project owner's construction/operation manager shall halt all site mobilization, ground disturbance, grading, boring, trenching, and operation activities in areas specified by the Designated Biologist. The Designated Biologist shall:

1. Require a halt to all activities in any area when determined that there would be an unauthorized adverse impact to biological resources if the activities continued;

2. Inform the project owner and the construction/operation manager when to resume activities; and

3. Notify BLM's Wildlife Biologist and the CPM if there is a halt of any activities and advise them of any corrective actions that have been taken or would be instituted as a result of the work stoppage.

4. If the Designated Biologist is unavailable for direct consultation, the Biological Monitor shall act on behalf of the Designated Biologist.

Verification: The project owner shall ensure that the Designated Biologist or Biological Monitor notifies BLM's Wildlife Biologist and the CPM immediately (and no later than the morning following the incident, or Monday morning in the case of a

weekend) of any non-compliance or a halt of any site mobilization, ground disturbance, grading, construction, and operation activities. The project owner shall notify BLM's Wildlife Biologist and the CPM of the circumstances and actions being taken to resolve the problem.

Whenever corrective action is taken by the project owner, a determination of success or failure would be made by BLM's Wildlife Biologist and the CPM within five working days after receipt of notice that corrective action is completed, or the project owner would be notified by BLM's Wildlife Biologist and the CPM that coordination with other agencies would require additional time before a determination can be made.

WORKER ENVIRONMENTAL AWARENESS PROGRAM (WEAP)

BIO-6 The project owner shall develop and implement a Project-specific Worker Environmental Awareness Program (WEAP) and shall secure approval for the WEAP from BLM's Wildlife Biologist and the CPM. The WEAP shall be administered to all onsite personnel including surveyors, construction engineers, employees, contractors, contractor's employees, supervisors, inspectors, subcontractors, and delivery personnel. The WEAP shall be implemented during site preconstruction, construction, operation, and closure. The WEAP shall:

1. Be developed by or in consultation with the Designated Biologist and consist of an on-site or training center presentation in which supporting written material and electronic media, including photographs of protected species, is made available to all participants;

2. Discuss the locations and types of sensitive biological resources on the project site and adjacent areas, and explain the reasons for protecting these resources; provide information to participants that no snakes, reptiles, or other wildlife shall be harmed;

3. Place special emphasis on desert tortoises, Mojave fringe-toed lizards, burrowing owls, golden eagles, nesting birds, badgers, and white-margined beardtongue, including information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures;

4. Include a discussion of fire prevention measures to be implemented by workers during project activities; request workers dispose of cigarettes and cigars appropriately and not leave them on the ground or buried;

5. Describe the temporary and permanent habitat protection measures to be implemented at the project site;

6. Identify whom to contact if there are further comments and questions about the material discussed in the program;

7. Include printed training materials, including photographs and brief descriptions of desert tortoises, Mojave fringe-toed lizards, burrowing owls, golden eagles, nesting birds, badgers, and white-margined beardtongue, including behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures;

8. Prominently display posters and descriptions in offices, conference rooms, employee break rooms, and other areas where employees may congregate of desert tortoises, Mojave fringe-toed lizards, burrowing owls, golden eagles, nesting birds, badgers, and white-margined beardtongue, including behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures; and

9. Include a training acknowledgment form to be signed by each worker indicating that they received training and shall abide by the guidelines.

The specific program can be administered by a competent individual(s) acceptable to the Designated Biologist.

Verification: Within 7 days of publication of the Energy Commission's License Decision, or the Record of Decision/ROW Issuance, whichever comes first, the project owner shall provide to BLM's Wildlife Biologist and the CPM a copy of the final WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner shall provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least 10 days prior to construction-related ground disturbance activities the project owner shall submit two copies of the BLM- and CPM-approved final WEAP. Training acknowledgement forms signed during construction shall be kept on file by the project owner for at least 6 months after the start of commercial operation.

Throughout the life of the project, the WEAP shall be repeated annually for permanent employees, and shall be routinely administered within one week of arrival to any new construction personnel, foremen, contractors, subcontractors, and other personnel potentially working within the project area. Upon completion of the orientation, employees shall sign a form stating that they attended the program and understand all protection measures. These forms shall be maintained by the project owner and shall be made available to BLM's Wildlife Biologist and the CPM upon request. Workers shall receive and be required to visibly display a hardhat sticker or certificate that they have completed the training.

During project operation, signed statements for operational personnel shall be kept on file for 6 months following the termination of an individual's employment.

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-7 The project owner shall develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRM IMP), and shall submit two copies of the proposed BRMIMP to the BLM-Wildlife Biologist and the CPM for review and approval. The project owner shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate avoidance and minimization measures described in final versions of the Hazardous Materials Plan; the Revegetation Plan; the Weed Management Plan; the Special-Status Plant Protection and Monitoring Plan; the Special-Status Plant Remedial Action Plan; the Seed Collection Plan; the Protected Plant Salvage Plan; the Desert Tortoise Translocation Plan; the Raven Monitoring, Management, and Control Plan; the Burrowing Owl Monitoring and Mitigation Plan; the Burrowing Owl Relocation Area Management Plan; the Bighorn Sheep Mitigation Plan; the Streambed Management Plan; and the Evaporation Pond Design, Monitoring, and Management Plan.

The BRMIMP shall be prepared in consultation with the Designated Biologist and shall include accurate and up-to-date maps depicting the location of sensitive biological resources that require temporary or permanent protection during construction and operation. The BRMIMP shall include complete and detailed descriptions of the following:

1. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the project owner;

2. All biological resources conditions of certification identified as necessary to avoid or mitigate impacts;

3. All biological resource mitigation, monitoring, and compliance measures required in federal agency terms and conditions, such as those provided in the USFWS Biological Opinion, the CDFG 2080.1 consultation, and BLM stipulations;

4. All sensitive biological resources to be impacted, avoided, or mitigated by project construction, operation, and closure;

5. All required mitigation measures for each sensitive biological resource;

6. All measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;

7. Duration for each type of monitoring and a description of monitoring methodologies and frequency;

8. Performance standards to be used to help decide if/when proposed mitigation is or is not successful;

9. All performance standards and remedial measures to be implemented if performance standards are not met;

10. Biological resources-related facility closure measures including a description of funding mechanism(s);

11. A process for proposing plan modifications to BLM's Wildlife Biologist and the CPM and appropriate agencies for review and approval; and

12. A requirement to submit any sightings of any special-status species that are observed on or in proximity to the project site, or during project surveys, to the California Natural Diversity Data Base (CNDDB) per CDFG requirements.

Verification: The project owner shall submit the final BRMIMP to BLM's Wildlife Biologist and the CPM at least 30 days prior to start of any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching. The BRMIMP shall contain all of the required measures included in all biological Conditions of Certification. No construction-related ground disturbance, grading, boring, or trenching may occur prior to approval of the final BRMIMP by BLM's Wildlife Biologist and the CPM.

If any permits have not yet been received when the BRMIMP is first submitted, these permits shall be submitted to BLM's Wildlife Biologist and the CPM within five days of their receipt, and the BRM IMP shall be revised or supplemented to reflect the permit conditions within at least 10 days of their receipt by the project owner. Ten days prior to site and related facilities mobilization, the revised BRM IMP shall be resubmitted to BLM's Wildlife Biologist and the CPM.

To verify that the extent of construction disturbance does not exceed that described in this analysis, the project owner shall submit aerial photographs, at an approved scale, taken before and after construction to the CPM and BLM's Wildlife Biologist. The first set of aerial photographs shall reflect site conditions prior to any preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching, and shall be submitted at least ~~60~~<30> days prior to initiation of such activities. The second set of aerial photographs shall be taken subsequent to completion of construction, and shall be submitted to the CPM and BLM's Wildlife Biologist no later than 90 days after completion of construction. The project owner shall also provide a final accounting of the acreages of vegetation communities/cover types present before and after construction and a depiction of the approved project boundaries superimposed on the post project aerial photograph. If final acreages and/or

disturbance footprints exceed those previously approved, the project owner shall coordinate with staff, CDFG, and USFWS to determine appropriate mitigation for such impacts. Such mitigation may exceed the requirements as outlined in these Conditions of Certification (i.e., higher mitigation ratios may be imposed at the discretion of the wildlife agencies).

Any changes to the approved BRMIMP (including the project footprint) must be approved by BLM's Wildlife Biologist and the CPM and in consultation with CDFG and USFWS before such action is taken. Implementation of BRMIMP measures (for example, construction activities that were monitored, species observed) shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to BLM's Wildlife Biologist and the CPM, for review and approval, a written Construction Termination Report identifying which items of the BRMIMP have been completed, summarizing all modifications to mitigation measures made during the project's preconstruction site mobilization and construction-related ground disturbance, grading, boring, and trenching, naming any mitigation and monitoring items still outstanding, and providing a timeline for implementing outstanding items. The project owner shall coordinate with the CPM and BLM's Wildlife Biologist to revise and finalize the Construction Termination Report to fulfill its reporting requirements to be outlined in the BRIMP.

IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-8 The project owner shall undertake the following measures to manage the construction site and related facilities in a manner to avoid or minimize impacts to biological resources. All measures shall be subject to review and approval by the CPM.

1. Limit Disturbance Areas and Perimeter Fencing. The boundaries of all areas to be disturbed (including staging areas, access roads, and sites for temporary placement of spoils) shall be delineated with stakes and flagging prior to construction activities in consultation with the Designated Biologist. Spoils and topsoil shall be stockpiled in disturbed areas lacking native vegetation and which do not provide habitat for special-status species. Parking areas, staging and disposal site locations shall similarly be located in areas without native vegetation or special-status species habitat. All disturbances, project vehicles, and equipment shall be confined to the flagged areas. Tortoise fencing shall be placed along the outside perimeter of the access road that would provide access to areas north of the project site.

2. Minimize Road Impacts. New and existing roads that are planned for construction, widening, or other improvements shall not extend beyond the flagged impact area as described above. All vehicles passing or turning around would do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads

or the construction zone, the route shall be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.

3. Minimize Traffic Impacts. Vehicular traffic during project construction and operation shall be confined to existing designated routes of travel to and from the project site, and cross country vehicle and equipment use outside designated work areas shall be prohibited. The speed limit shall not exceed 25 miles per hour within the project area, on maintenance roads for linear facilities, or on access roads to the project site. Speed limits on paved roads shall be consisted with posted speed limits.

4. Monitor During Construction. Due to the likelihood that juvenile desert tortoises may persist on the site after desert tortoise clearance surveys and exclusion fencing are completed, the Designated Biologist or Biological Monitor shall be present at the construction site during all project activities that have potential to disturb soil, vegetation, and wildlife. The Designated Biologist or Biological Monitor shall walk immediately ahead of equipment during brushing and grading activities. Any time over the life of the project that a desert tortoise is found within the exclusion fencing, the Designated Biologist shall immediately contact the CPM, CDFG, BLM and USFWS; monitor the tortoise's location and activities; and implement translocation of the animal in accordance with and the approved Desert Tortoise Translocation Plan and in consultation with the USFWS, CDFG, BLM, and CPM.

5. 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. For construction activities outside of the plant site (transmission line, pipeline alignments) access roads, pulling sites, and storage and parking areas shall be designed, installed, and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLI C'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 large bird electrocutions and collisions.

6. Avoid Use of Toxic Substances. Soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants.

7. Minimize Lighting Impacts. Facility lighting shall be designed, installed, and maintained to prevent side casting of light towards wildlife habitat.

8. Avoid Vehicle Impacts to Desert Tortoise. Parking and storage shall occur within the area enclosed by desert tortoise exclusion fencing to the extent

feasible. No vehicles or construction equipment parked outside the fenced area shall be moved prior to an inspection of the ground beneath the vehicle for the presence of desert tortoise. If a desert tortoise is observed, it shall be left to move on its own. If it does not move within 15 minutes, a Designated Biologist or Biological Monitor under the Designated Biologist's direct supervision may remove and relocate the animal to a safe location if temperatures are within the range described in the USFWS' 2009 *Desert Tortoise Field Manual* (http ://www.fws.gov/ventura/speciesi nfo/protocols_ guidelines). All tortoise translocation will be consistent with the measures identified in the Desert Tortoise Translocation Plan. All access roads outside of the fenced project footprint shall be delineated with temporary desert tortoise exclusion fencing on either side of the access road, unless otherwise authorized by the CPM, BLM Wildlife Biologist, USFWS, and CDFG.

9. Avoid Wildlife Pitfalls:

   a. Avoid Wildlife Entrapment. At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) have been backfilled. If backfilling is not done, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with desert tortoise-exclusion fencing. All trenches, bores, and other excavations outside the areas permanently fenced with desert tortoise exclusion fencing shall be inspected periodically, but no less than three times, throughout the day 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 as described in the Desert Tortoise Relocation/Translocation Plan. Any wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.

   b. Avoid Entrapment of Desert Tortoise. Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches, stored less than 8 inches aboveground area) for one or more nights, shall be inspected for tortoises before the material is moved, buried, or capped. As an alternative, all such structures may be capped before being stored outside the fenced area, or placed on pipe racks.

10. Minimize Standing Water. Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. A Biological Monitor shall patrol

these areas to ensure water does not puddle and shall take appropriate action to reduce water application where necessary.

11. Dispose of Road-killed Animals. Road-killed animals or other carcasses detected on roads near the project area shall be picked up immediately and delivered to the Biological Monitor. For special-status species roadkill, the Biological Monitor shall contact USFWS and CDFG within 1 working day of receipt of the carcass for guidance on disposal or storage of the carcass. The Biological Monitor shall report the special-status species record as described in Conditions of Certification **BIO-2** and **BIO-26.**

12. Minimize Spills of Hazardous Materials. All vehicles and equipment shall be maintained in proper working condition to minimize the potential for fugitive emissions of motor oil, antifreeze, hydraulic fluid, grease, or other hazardous materials. The Designated Biologist shall be informed of any hazardous spills immediately as directed in the project Hazardous Materials Plan. Hazardous spills shall be immediately cleaned up and the contaminated soil properly disposed of at a licensed facility. Servicing of construction equipment shall take place only at a designated area. Service/maintenance vehicles shall carry a bucket and pads to absorb leaks or spills.

13. Worker Guidelines. During construction all trash and food-related waste shall be placed in self-closing containers and removed from the site regularly to prevent overflow. 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. Vehicular traffic 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 when traveling on dirt access routes within desert tortoise habitat shall not exceed 25 miles per hour.

14. Implement Erosion Control Measures. Standard erosion control measures shall be implemented for all phases of construction and operation to prevent any sediment run-off from exposed slopes from entering state-jurisdictional streambeds on or off the Project site. Sediment and other flow-restricting materials shall be moved to a location where they shall not be washed back into the streambed. All disturbed soils and roads within the project site shall be stabilized to reduce erosion potential, both during and following construction, except that soil stabilizer use may be limited in portions of roads crossing washes or stream channels consistent with applicable water quality requirements.

15. Monitor Ground-Disturbing Activities Prior to Pre-Construction Site Mobilization. If pre-construction site mobilization requires ground-disturbing activities such as for geotechnical borings or hazardous waste

evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.

16. Control and Regulate Fugitive Dust. To reduce the potential for the transmission of fugitive dust the project owner shall implement dust control measures. These shall include:

    a. The project owner shall apply non-toxic soil binders, equivalent or better in efficiencies than the CARB-approved soil binders, to active unpaved roadways, unpaved staging areas, and unpaved parking area(s) throughout construction to reduce fugitive dust emissions.

    b. Water the disturbed areas of the active construction sites at least three times per day and more often if uncontrolled fugitive dust is noted.

    c. Enclose, cover, water twice daily, and/or apply non-toxic soil binders according to manufacturer's specifications to exposed piles with a 5% or greater silt content.

    d. Establish a vegetative ground cover, consistent with **BIO-10,** or otherwise create stabilized surfaces on all unpaved areas at each of the construction sites within 21 days after active construction operations have ceased, consistent with erosion control measures described above.

    e. Increase the frequency of watering, if water is used as a soil binder for disturbed surfaces, or implement other additional fugitive dust mitigation measures, to all active disturbed fugitive dust emission sources when wind speeds (as instantaneous wind gusts) exceed 25 mph.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures shall be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to BLM's Wildlife Biologist and the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

COMPLIANCE VERIFICATION

BIO-9 The project owner shall provide Energy Commission staff, BLM, CDFG, and USFWS with reasonable access to the project site and mitigation lands under the control of the project owner and shall otherwise fully cooperate with the Energy Commission's and BLM's efforts to verify the project owner's compliance with, or the effectiveness of, mitigation measures set forth in the conditions of certification. The project owner shall hold harmless the Designated Biologist, the Energy Commission and staff, BLM, and any other

agencies with regulatory requirements addressed by the Energy Commission's sole permitting authority for any costs the project owner incurs in complying with the management measures, including stop work orders issued by the CPM or the Designated Biologist. The Designated Biologist shall do all of the following:

1. Notification. Notify the CPM, BLM, CDFG, and USFWS at least 14 calendar days before initiating ground-disturbing activities. Immediately notify the CPM, BLM, CDFG, and USFWS in writing if the project owner is not in compliance with any conditions of certification, including but not limited to any actual or anticipated failure to implement mitigation measures within the time periods specified in the conditions of certification. CDFG shall be notified at their Southern Region Headquarters Office, 4949 Viewridge Avenue, San Diego, CA 92123; (858) 467-4201. USFWS shall be notified at their Ventura office at 2493 Portola Road, Suite B, Ventura, CA 93003; (805) 644-1766.

2. Monitoring During Grading. Remain on site daily while grubbing and grading are taking place to avoid or minimize take of listed species, to check for compliance with all impact avoidance and minimization measures, and to check all exclusion zones to ensure that signs, stakes, and fencing are intact and that human activities are restricted in these protected zones.

3. Fence Monitoring. During construction maintain and check desert tortoise exclusion fences on a daily basis to ensure the integrity of the fence is maintained. The Designated Biologist shall be present on site to monitor construction and determine fence placement during fence installation. During operation of the project, fence inspections shall occur at least once per month throughout the life of the project, and within 24 hours after storms or other events that might affect the integrity and function of desert tortoise exclusion fences. Fence repairs shall occur within two days (48 hours) of detecting problems that affect the functioning of the desert tortoise exclusion fencing. If fence damage occurs during any time of year when tortoises may be active, the project owner shall be responsible for monitoring the site of the damaged fence until it is fully repaired, to prevent a desert tortoise from entering the project area. All incidents of damaged tortoise exclusion fence, including dates of damage and repair; extent of damage; and monitoring summaries (methods and results) shall be reported to the BLM, CPM, CDFG, and USFWS. All wildlife found entrapped or dead in the fence shall be reported to the BLM, CPM, CDFG, and USFWS.

4. Monthly Compliance Inspections. Conduct compliance inspections at a minimum of once per month after clearing, grubbing, and grading are completed and submit a monthly compliance report to the CPM, BLM, USFWS, and CDFG. All observations of listed species and their sign shall

be reported to the Designated Biologist for inclusion in the monthly compliance report.

5. Annual Listed Species Status Report. No later than January 31 of every year the Project facility remains in operation, provide the CPM, BLM, USFWS, and CDFG an annual Listed Species Status Report, which shall include, at a minimum: 1) a general description of the status of the project site and construction/operation activities, including actual or projected completion dates, if known; 2) a copy of the table in the BRMIMP with notes showing the current implementation status of each mitigation measure; 3) an assessment of the effectiveness of each completed or partially completed mitigation measure in minimizing and compensating for project impacts, 4) recommendations on how effectiveness of mitigation measures might be improved, and 5) a summary of any agency approved modifications to the BRMIMP.

6. Final Listed Species Mitigation Report. No later than 45 days after initiation of project operation, provide the CPM a Final Listed Species Mitigation Report that shall include, at a minimum: 1) a copy of the table in the BRMIMP with notes showing when each of the mitigation measures was implemented; 2) all available information about project-related incidental take of listed species; 3) information about other project impacts on the listed species; 4) construction dates; 5) an assessment of the effectiveness of conditions of certification in minimizing and compensating for project impacts; 6) recommendations on how mitigation measures might be changed to more effectively minimize and mitigate the impacts of future projects on the listed species; and 7) any other pertinent information, including the level of take of the listed species associated with the project.

7. Notification of Injured, Dead, or Relocated Listed Species. In the event of a sighting in an active construction area (e.g., with equipment, vehicles, or workers), injury, kill, or relocation of any listed species, the CPM, BLM, CDFG, and USFWS shall be notified immediately by phone by the Designated Biologist or Biological Monitor. Notification shall occur no later than noon on the business day following the event if it occurs outside normal business hours so that the agencies can determine if further actions are required to protect listed species. Written follow-up notification via FAX or electronic communication shall be submitted to these agencies within five calendar days of the incident and include the following information as relevant:

    a. Injured Desert Tortoise. If a desert tortoise is injured as a result of project-related activities during construction, the Designated Biologist shall immediately take it to a CDFG-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by the project owner. Following phone notification as

required above, the CPM, BLM, CDFG, and USFWS shall determine the final disposition of the injured animal, if it recovers. Written notification shall include, at a minimum, the date, time, location, circumstances of the incident, and the name of the facility where the animal was taken.

b. Desert Tortoise Fatality. If a desert tortoise is killed by project-related activities during construction or operation, or if a desert tortoise is otherwise found dead, submit a written report with the same information as an injury report. These desert tortoises shall be salvaged according to guidelines described in Salvaging Injured, Recently Dead, Ill, and Dying Wild, Free-Roaming Desert Tortoise (Berry 2001). The project owner shall pay to have the desert tortoises transported and necropsied. The report shall include the date and time of the finding or incident.

8. Stop Work Order. The CPM/BLM may issue the project owner a written stop work order to suspend any activity related to the construction or operation of the project to prevent or remedy a violation of one or more conditions of certification (including but not limited to failure to comply with reporting, monitoring, or habitat acquisition obligations) or to prevent the illegal take of an endangered, threatened, or candidate species. The project owner shall comply with the stop work order immediately upon receipt thereof.

Verification: No later than two calendar days following the above-required notification of a sighting, kill, injury, or relocation of a listed species, the project owner shall deliver to the CPM, BLM, CDFG, and USFWS via FAX or electronic communication the written report from the Designated Biologist describing all reported incidents of the sighting, injury, kill, or relocation of a listed species, identifying who was notified and explaining when the incidents occurred. In the case of a sighting in an active construction area, the project owner shall, at the same time, submit a map (e.g., using Geographic Information Systems) depicting both the limits of construction and sighting location to the CPM, BLM, CDFG, and USFWS.

No later than January 31st of every year the Calico Solar Project facility remains in operation, provide the CPM and BLM an annual Listed Species Status Report as described above, and a summary of desert tortoise exclusion fence inspections and repairs conducted in the course of the year.

REVEGETATION PLAN AND COMPENSATION FOR IMPACTS TO NATIVE VEGETATION COMMUNITIES

BIO-10 The project owner shall provide restoration/compensation for impacts to native vegetation communities and develop and implement a Revegetation Plan for all areas subject to temporary project disturbance, including but not limited to linear features and berms of detention or debris basins, to the extent permitted

by stormwater control requirements. Upon completion of construction, all temporarily disturbed areas shall be restored to pre-project grade and revegetated according to the measures described below. Temporarily disturbed areas within the project area include, but are not limited to: all areas where underground infrastructure was installed, temporary access roads, construction work temporary lay-down areas, and construction equipment staging areas. For the purpose of this mitigation measure, "temporarily disturbed areas" shall include disturbances that are considered permanent impacts in the analyses above (i.e., would take more than 5 years to recover) but would benefit from the revegetation activities identified here. The following measures shall be implemented for all temporarily disturbed areas, excluding areas immediately around facilities which may be landscaped according to a separate Landscape Plan. These measures will include:

1. Plan Details. The plans shall include at minimum: (a) locations and details for top soil storage; (b) methods to salvage and replant cacti, yucca or other species described in **BIO-12** Section E, or to plant out nursery stock of these species onto revegetation sites; (c) seed collection guidelines; (d) a schematic depicting the mitigation area; (e) time of year that the planting will occur and the methodology of the planting; (f) a description of the irrigation methodology if used; (g) measures to control exotic vegetation on site; (h) performance standards (see below); and (i) a detailed monitoring program. All habitats dominated by non-native species prior to project disturbance shall be revegetated using appropriate native species. This plan shall also contain contingency measures for failed restoration efforts (efforts not meeting success criteria).

2. Topsoil Salvage. Topsoil shall be stockpiled from the project site for use in revegetation of the disturbed soils. The topsoil excavated shall be segregated, kept intact, and protected, under conditions shown to sustain seed bank viability. The upper 1 inch of topsoil which contains the seed bank shall be scraped and stockpiled for use as the top-dressing for the revegetation area. An additional 6 to 8 inches of soil below the top 1 inch of soil shall also be scraped and separately stockpiled for use in revegetation areas. Topsoil shall be replaced in its original vertical orientation following ground disturbance, ensuring the integrity of the top one inch in particular. All other elements of soil stockpiling shall be conducted as described on pages 39-40 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003).

3. Seed and Nursery Stock. Only seed or potted nursery stock of locally occurring native 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. Seeding and planting 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 plants observed during the 2010 special-status plant surveys of the Project area can also be used as a guide to site-specific plant selection for revegetation. In conformance with BLM policy, the project owner shall include salvaged or nursery stock yucca (all species), cacti (excluding cholla species, genus *Cylindropuntia),* smoke tree, mesquites, and desert ironwood in revegetation plans and implementation, as described in **BIO-12** Section E.

4. Monitoring Requirement and Performance Standards. Post-seeding and planting monitoring will be yearly and shall continue for a period of no less than 10 years or until the defined performance standards are achieved (whichever is later). Remediation activities (e.g., additional planting, removal of non-native invasive species, or erosion control) shall be taken during the 10-year period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance standards after the 10-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the 10-year period until the performance standards are met, unless otherwise specified by the Energy Commission and BLM. As needed to achieve performance standards, the project owner shall be responsible for replacement planting or other remedial action as agreed to by BLM and CPM. Replacement plants shall be monitored with the same survival and growth requirements as required for original revegetation plantings. The following performance standards must be met by the end of the monitoring period: (a) at least 80% of the species and vegetative cover observed within the temporarily disturbed areas shall be native species that naturally occur in desert scrub habitats; (b) absolute cover and density of native plant species within the revegetated areas shall equal at least 60% of the pre-disturbance or reference vegetation cover; and (c) the site shall have gone without irrigation or remedial planting for a minimum of three years prior to completion of monitoring.

5. If a fire or flood damages a revegetation area within the 10-year monitoring period, the owner shall be responsible for a one-time replacement. If a second fire or flood occurs, no replanting is required, unless the event is caused by the owner's activity (e.g., as determined by BLM or other firefighting agency investigation).

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Within 90 days after completion of each year of project construction, the project owner shall provide to the CPM verification of the total vegetation acreage subject to temporary and permanent disturbance. To monitor and evaluate the success of the revegetation, the project owner shall submit annual reports of the revegetation including the status of the site, percent cover of native and

exotics, and any remedial actions conducted by the owner to the CPM and BLM Wildlife Biologist.

No less than 30 days following the publication of the Energy Commission License Decision or the Record of Decision/ROW Issuance, whichever comes first, the project owner shall submit to the CPM and BLM's Wildlife Biologist a final agency-approved Revegetation Plan that has been reviewed and approved by BLM's Wildlife Biologist and the CPM. The Plan shall include a Plant Salvage and Replacement Section as described in **BIO-12** Section E. All modifications to the Revegetation Plan shall be made only after approval from BLM's Wildlife Biologist and the CPM.

Within 30 days after completion of each year of project construction, the project owner shall provide to the CPM for review and approval, a written report identifying which items of the Revegetation Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding.

On January 31st of each year following construction until the completion of the revegetation monitoring specified in the Revegetation Plan, the Designated Biologist shall provide a report to the CPM and BLM's Wildlife Biologist that includes: a summary of revegetation activities for the year, a discussion of whether revegetation performance standards for the year were met; and recommendations for revegetation remedial action, if warranted, are planned for the upcoming year.

WEED MANAGEMENT PLAN

BIO-11 The project owner shall revise and implement a Weed Management Plan that meets the approval of BLM and CPM. The draft Noxious Weed Management Plan submitted by the applicant shall provide the basis for the final plan, subject to review and revisions from BLM, USFWS, CDFG, and the CPM.

The final plan shall include weed control measures with demonstrated records of success, based on the best available information from sources such as: The Nature Conservancy's The Global Invasive Species Team, Cooperative Extension, California Invasive Plant Council http://www.cal-ipc.org/ip/management/plant profiles/index.php, and the California Department of Food & Agriculture Encycloweedia: http://www.cdfa.ca.gov/phpps/ipc/encycloweedia/ encycloweedia hp.htm. The methods shall meet the following criteria:

1. Manual: well-timed removal of plants or seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the Riverside County Agricultural Commissioner.

2. Chemical: Herbicides known to have residual toxicity, such as pre-emergents and pellts, shall not be used in natural areas or within the engineered channels. Only the following application methods may be

used: wick (wiping onto leaves); inner bark injection; cut stump; frill or hack & squirt (into cuts in the trunk); basal bark girdling; foliar spot spraying with backpack sprayers or pump sprayers at low pressure or with a shield attachment to control drift, and only on windless days, or with a squeeze bottle for small infestations.

In addition to describing weed eradication and control methods, and a reporting plan for weed management during and after construction, the final Weed Management Plan shall include at least the following Best Management Practices to prevent the spread and propagation of weeds:

- Limit the extent of any vegetation and/or ground disturbance to the absolute minimum needed, and limit ingress and egress to defined routes.

- Install and maintain vehicle wash and inspection stations and closely monitor the types of materials brought onto the site.

- Reestablish vegetation on disturbed sites with native seed mixes (measures and performance standards to be consistent with Revegetation Plan, described in Condition of Certification **BIO-10**).

- Monitoring and timely implementation of control measures to ensure early detection and eradication for weed invasions. Weed infestations must be controlled or eradicated as soon as possible upon discovery, and before they go to seed, to prevent further expansion.

- Use only weed-free straw or hay bales used for sediment barrier installations, and weed-free seed.

- Reclamation and revegetation shall occur on all temporarily disturbed areas, including, but not limited to, transmission lines, temporary access roads, construction work temporary lay-down areas, and staging areas.

- Control weeds in areas where irrigation and mirror washing take place.

- Prohibit disposal of mulch or green waste from mown weed infestations around the solar generators to prevent inadvertent introduction and spread of invasive plants beyond the immediate vicinity of the project area and possibly into rare plant populations off-site. Mulch or green waste shall be removed from the site in a covered vehicle to prevent seed dispersal, and transported to a landfill or composting facility.

- Indicate where herbicides may be used, which herbicides, and specify techniques to be used to avoid chemical drift or residual toxicity to special-status plants, consistent with guidelines provided by the Nature Conservancy's The Global Invasive Species Team (http://www.invasive.org/gist/products. html).

- Avoid herbicide use or other control methods in or around Environmentally Sensitive Areas (ESAs, see Condition of Certification **BIO-12)** on-site or off-site; prevent any herbicide drift into ESAs.

From the time construction begins and throughout the life of the project , surveying for new invasive weed populations and the monitoring of identified and treated populations shall be required within the project area and surrounding 250-foot buffer area. See also requirements for weed monitoring and treatment in the adjacent Pisgah Crater ACEC described in Condition of Certification **BIO-12.** Surveying and monitoring for weed infestations shall occur annually. Treatment of all identified weed populations shall occur at a minimum of once annually. When no new seedlings or resprouts are observed at treated sites for three consecutive, average rainfall years, the weed infestation at that site can be considered eradicated and weed control efforts, but not annual monitoring, may cease for that impact site.

Verification: At least 30 days prior to start of any project-related ground disturbance activities, the project owner shall provide the BLM's Wildlife Biologist and the CPM with the revised Weed Management Plan. The project owner shall coordinate with the CPM and BLM's Wildlife Biologist to revise and finalize the Weed Management Plan. Any further modifications to the approved Weed Management Plan shall be made only after consultation with the CPM and BLM's Wildlife Biologist , in consultation with USFWS and CDFG. Within 30 days after completion of project construction, the project owner shall provide to the BLM's Wildlife Biologist and the CPM for review and approval, a written report identifying which items of the Weed Management Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and which items are still outstanding. A summary report on weed management on the project site shall be submitted in the Annual Compliance Report during plant operations.

SPECIAL-STATUS PLANT IMPACT AVOIDANCE AND MINIMIZATION

BIO-12 This condition contains the following five sections:

- **Section A: White-margined Beardtongue Avoidance and Minimization Measures** describes measures to protect all white-margined beardtongue plants located within the project area or within 250 feet of its boundaries (including access roads, staging

areas, laydown areas, parking and storage areas) from accidental and indirect impacts during construction, operation, and closure.

- **Section B: Conduct Late Season Botanical Surveys** describes guidelines for conducting summer-fall 2010 surveys to detect special-status plants that would have been missed during the spring 2010 surveys.

- **Section C: Mitigation Requirements for Special-Status Plants Detected in the Summer/Fall 2010 Surveys** outlines the level of avoidance required for plants detected during the summer-fall surveys, based on the species' rarity and conservation status. Avoidance is based on extent of local occurrences on the project site and, as applicable, extending onto contiguous public land. Where avoidance would result in on-site isolation of plant occurrences from essential ecological processes, or would cause local populations to become inviable, then off-site compensation would be allowed.

- **Section D: Off-Site Compensatory Mitigation for Special-Status Plants** describes performance standards for mitigation for a range of options for compensatory mitigation through acquisition, restoration/enhancement, or a combination of acquisition and restoration/enhancement, based on the species' rarity and conservation status.

- **Section E: Plant Salvage** describes measures to include potted nursery stock or salvaged specimens of certain cacti, yucca, and other species listed in San Bernardino County plant protection policies in revegetation plans, in conformance with BLM policy.

"Project Disturbance Area" encompasses all areas to be temporarily and permanently disturbed by the Project, including the plant site, linear facilities, and areas disturbed by temporary access roads, fence installation, construction work lay-down and staging areas, parking, storage, or by any other activities resulting in disturbance to soil or vegetation. Nothing in this condition requires the project owner to conduct botanical surveys on private lands adjacent to the project site when the project owner has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission.

The Project owner shall implement the following measures in Section A, B, C, D and E to avoid, minimize, and compensate for impacts to certain special-status plant species, based on species rarity and conservation status:

SECTION A: WHITE-MARGINED BEARDTONGUE AVOIDANCE AND MINIMIZATION MEASURES

To protect all white-margined beardtongue plants located within the project area or within 250 feet of its boundaries (including access roads, staging areas, laydown areas, parking and storage areas) from accidental and indirect impacts during construction, operation, and closure, the Project owner shall implement the following measures:

1. Designated Botanist. An experienced botanist who meets the qualifications described in Section **B-2** below shall oversee compliance with all special-status plant avoidance, minimization, and compensation measures described in this condition throughout construction, operation, and closure. The Designated Botanist shall oversee and train all other Biological Monitors tasked with conducting botanical survey and monitoring work.

2. White-margined Beardtongue Impact Avoidance and Minimization Plan. The Project owner shall prepare and implement a White-margined Beardtongue Impact Avoidance and Minimization Plan and shall incorporate the Plan into the BRM IMP (**BIO-7).** The Plan shall be designed to prevent direct or indirect effects of project construction and operation to all white-margined beardtongue occurrences within the project boundary, and to any other special status plants including small-flowered androstephium located within Environmentally Sensitive Areas (defined below). The Plan shall include the following elements:

    a. Designate Environmentally Sensitive Areas (ESAs). Before construction, designate ESAs to protect all known white-margined beardtongue locations on the project site or within 250 feet of site boundaries. The ESAs shall include, at minimum, the approximately 18 acres of white-margined beardtongue occurrences as identified on Applicant's Exhibit 57, Alternative Site Layout #2. The locations of ESAs shall be clearly depicted on construction drawings, which shall also include all avoidance and minimization measures on the margins of the construction plans. The boundaries of the ESAs shall provide a minimum of 250 feet buffer area between white-margined beardtongue plant locations and any ground-disturbing project activity. The ESAs shall be clearly delineated in the field with permanent fencing and signs prohibiting movement of the fence under penalty of work stoppages and additional compensatory mitigation. ESAs shall also be permanently marked (with signage or other markers) to ensure that avoided plants are not inadvertently harmed during construction, operation, or closure.

    b. Baseline data. Document baseline conditions, including numbers and areal extent of white-margined beardtongue and any other special-status plant occurrences within the ESAs;

c. Success criteria. Specify success standards for protection of special-status plant occurrences within the ESAs, and identify specific triggers for remedial action (e.g., numbers of plants dropping below a threshold);

d. Literature review. Describe and reference any available information about microhabitat preferences and fecundity, essential pollinators, reproductive biology, and propagation and culture requirements for white-margined beardtongue and any other special-status species within the ESAs;

e. Protection and avoidance measures. Describe measures (e.g., fencing, signage) to avoid direct and indirect construction and operation impacts to special-status plants within the ESAs; these shall include but shall not be limited to: (1) training components specific to protection of white-margined beardtongue and surrounding habitat buffer area, which shall be incorporated into the WEAP described in **BIO-6;** (2) detailed specifications for avoiding herbicide and soil stabilizer drift, and shall include a list of herbicides and soil stabilizers that may be used on the Project with manufacturer's guidance on appropriate use; the Plan shall reference the Weed Management Plan (see Condition of Certification **BIO-1 1)** and shall be consistent with provisions of that Plan; (3) measures to ensure that erosion and sediment control do not inadvertently impact special-status plants located within an ESA (e.g., by using invasive or non-native plants in seed mixes, introducing pest plants through contaminated seed or straw, etc.). Where applicable, these measures shall be incorporated in the Weed Management Plan and Storm Water Pollution Prevention Plan. Also, designate spoil areas; equipment, vehicle, and materials storage areas; parking; equipment and vehicle maintenance areas, and; wash areas at least 100 feet from boundaries of any ESAs;

f. Monitoring and Reporting Requirements. The Designated Botanist shall conduct weekly monitoring of the ESAs during any construction, or decommissioning activities within 100 feet of the ESAs, and quarterly monitoring for the remainder of construction and during operations. The Project owner shall also conduct annual monitoring of the avoided occurrences within ESAs on ~~site, and off-site occurrences that are adjacent to the Project site,~~< site> for the life of the Project (see Verification, below).

g. Remedial Action Measures. Specify remedial action measures to be implemented if success standards (above) are not met at any time during the life of the project;

h. Seed Collection. ~~Over~~<As feasible, over> the life of the project, the project owner shall collect a small proportion of any seed produced by

white-margined beardtongue plants protected on-site within ESAs. <Feasibility shall be determined based on the availability of seeds prior to construction activities. For Phase 1a and 1b, it is recognized that seed collection may not be possible given the timing of approvals and the scheduled initiation of construction. >Seed collection must only be done under permit from the BLM; the project owner shall be responsible for obtaining and complying with applicable permit(s). The collection technique shall follow seed collection and storage guidelines contained in (Wall 2009a; Bainbridge 2007). Collection of seed shall be done by the Rancho Santa Ana Botanic Garden (RSABG) Conservation Program staff or other qualified seed or restoration specialist. The Project owner shall be responsible for all costs associated with seed collection and storage. All seed storage shall occur at RSABG or other qualified research institution and at least 40 percent of the collected seed shall remain in long-term storage at RSABG Seed Conservation Program, San Diego Natural History Museum, or other qualified seed conservation program;

i. ~~Propagation research. The project own shall be responsible for evaluating potential white-margined beardtongue propagation and reintroduction methods with the objective of developing horticultural techniques suitable for eventual introduction of nursery-grown white-margined beardtongue on-site or off-site as remedial action measures if needed (paragraph g., above); a portion of seed (paragraph h., above) shall be made available for propagation research which may at some time inform contingency propagation efforts on the project site or elsewhere; propagation experimentation shall be funded by the project owner and conducted by a qualified research institution such as Rancho Santa Ana Botanic Garden and the results shall not be subject to a non-disclosure agreement. At minimum, propagation research shall include germination and seedling establishment trials under a variety of soil and humidity conditions reflecting the range of seasonal conditions found in the plant's natural habitat on the project site; plant growth from seedling to nursery stock size; and transplantation methods. These trials shall be conducted in part within growth chambers where temperature and humidity are controlled and in part on the project site or adjacent Pisgah ACEC under natural conditions.~~

~~j.~~ Off-site sand transport monitoring and management. The White-margined Beardtongue Impact Avoidance and Minimization Plan shall include a sand transport monitoring and management to document and manage project effects to eastward sand transport to occupied white-margined beardtongue aeolian sand habitat off-site to the east. At minimum, the plan shall include the following elements (1) quantify baseline eastward sand transport from the project area into the adjacent BLM Pisgah Crater ACEC, following methods described by Etyemezian et al. (2010); (2) specify methods and schedule for annual

sand transport monitoring throughout the first five years of the project's life; (3) identification of thresholds which would trigger remediation requirements; and (4) development of adaptive management strategies to supplement eastward sand transport into the ACEC if needed. These strategies may include revisions to project fencing design, importing sand from off-site, or transporting sand across the project site for further dispersal. No sand transport remediation work would be permitted to cause new land disturbance outside the project area as analyzed in this SSA.

~~k. Off-site weed monitoring and management. The White-margined Beardtongue Impact Avoidance and Minimization Plan shall include methods and schedule to monitor and manage weed abundance in occupied and suitable white-margined beardtongue habitat to the east. At minimum, the plan shall (1) quantify baseline weed abundance in the portion of the ACEC adjacent BLM Pisgah Crater ACEC, adjacent to and within 500 m of the eastern project boundary, north of the BNSF railroad tracks; (2) weed abundance monitoring schedule and methods to implement throughout that area by collecting and analyzing quantitative weed abundance during every year of average or greater rainfall throughout the life of the project; (3) identify weed abundance thresholds which would trigger remediation requirements; and (4) specify weed control methods to be implemented as needed in occupied and suitable white-margined beardtongue habitat throughout the area described above.~~

SECTION B: CONDUCT LATE-SEASON BOTANICAL SURVEYS

The Project owner shall conduct late-summer/fall <2010 >botanical surveys for late-season special-status plants as described below:

1. Survey Timing. To the extent feasible, surveys shall be timed to detect: a) summer annuals triggered to germinate by the warm, tropical summer storms (which may occur any time between June and October), and b) fall-blooming perennials that respond to the cooler, later season storms that originate in the Pacific northwest (typically beginning in September or October), if identification may require leaves, flowers, or other structures not available during spring surveys previously completed. The survey dates shall be based on plant phenology and the timing of a significant storm (i.e., a 10 mm or greater rain or multiple storm events of sufficient volume to trigger germination, as measured at or within 1 mile of the Project site) if an event is recorded. Surveys for summer annuals shall be timed as needed and feasible to identify target species (below), based upon field visits to reference populations. However, due to the undependable nature and scattered patterns of summer and early fall rainfall, it is possible that no suitable rain event will be documented in the area. Nevertheless, the project own shall be responsible for conducting

late-season botanical surveys along washes and other lowland areas on-site due to the possibility that rainstorms in the Cady Mountains may go undetected, but may initiate summer or fall blooms.

2. Surveyor Qualifications and Training. Surveys shall be conducted by a qualified botanist knowledgeable in the complex biology of the local flora, and consistent with CDFG (2009) and BLM (2009) protocols. The botanical survey crew shall be prepared to mobilize quickly to conduct appropriately timed surveys. Each field botanist shall be equipped with a GPS unit and record a complete tracklog; these data shall be compiled and submitted along with the Summer-Fall Survey Botanical Report (described below). Prior to the start of surveys, all crew members shall, at a minimum, visit target species reference sites (where available) and/or review herbarium specimens to confirm detectability and obtain a search image.

3. Target Species. Field surveys shall be designed and scheduled to locate target species, defined as all BLM Sensitive plants, CNPS List 1B or 2 (Nature Serve rank S1 and S2) or proposed List 1B or 2 taxa, and any newly reported or documented taxa. Because the potential for range extensions is unknown, the list of potentially occurring special-status plants shall include all special-status taxa known from comparable habitats in the central portion of the Mojave Desert in California. At a minimum, the list shall include all summer or fall-flowering species identified as potentially occurring on the site in the applicant's spring 2010 botanical survey report (TS 2010i) and by Andre (2010, Intervenor Defenders of Wildlife Rebuttal Testimony). Determination of flowering season shall be based upon field visits to reference populations and data available online from the Consortium of California Herbaria and California Native Plant Society. Target species also shall include taxa with bloom seasons that begin in fall and extend into the early spring as many of these are reported to be easier to detect in fall, following the start of the fall rains.

4. Survey Coverage. At a minimum, the Applicant shall conduct comprehensive surveys (i.e., 100 percent visual coverage) of the washes, dune swales, and other lowlands within the project site. In the intervening uplands (e.g., bajadas and rock outcrops) surveys shall be conducted to ensure a 25 percent visual coverage. Other special or unique habitats associated with rare plants (such as dunes, washes, and chenopod scrubs) shall also be surveyed at 100 percent visual coverage. Transects shall be "intuitive controlled" (per BLM 2009b) to ensure a focus on habitat most likely to support rare plants (such as desert washes or dunes), rather than on pre-defined, evenly-spaced survey grids.

5. Documenting Occurrences. If a special-status plant is detected, the full extent of the population onsite shall be recorded using GPS in

accordance with BLM survey protocols. Additionally, the extent and density of the occupied habitat within one mile of project boundaries shall be assessed at least qualitatively to facilitate an accurate estimation of the proportion of the occurrence affected by the project. For occurrences that are very dense or very large, the plant numbers may be estimated by simple sampling techniques and the survey report must provide qualitative or quantitative data describing the density and roughly mapping the extent on a topographic map. All but the smallest populations (e.g., a population occupying less than 100 square feet) shall be recorded as area polygons; small populations may be recorded as point features. All GPS-recorded occurrences shall include: the number of plants, phenology, observed threats (e.g., OHV or invasive exotics), and habitat or community type. The map of occurrences, to be submitted with the final botanical report, shall be prepared to ensure consistency with mapping protocol and definitions of occurrences in CNDDB: occurrences found within 0.25 miles of another occurrence of the same taxon, and not separated by significant habitat discontinuities, shall be combined into a single 'occurrence.' The Project Owner shall also submit the raw GPS shape files and metadata, and completed CNDDB forms to CNDDB for each occurrence as defined by CNDDB.

6. Reporting. Raw GPS data, metadata, and CNDDB field forms shall be provided to the CPM within two weeks of completion of each survey. If field surveys take place during two or more phases (e.g., late summer and fall), then a summary letter shall be submitted following each survey.

   The Final Summer-Fall Botanical Survey Report shall be prepared consistent with CDFG guidelines (CDFG 2009), and BLM guidelines (2009) and shall include the following components:

   a. the BLM designation, NatureServe Global and State Rank of each species or taxon found (or proposed rank, or CNPS List);

   b. the number or percent of the occurrence that will be directly affected, and indirectly affected by changes in drainage patterns or altered geomorphic processes;

   c. the habitat or plant community that supports the occurrence and the total acres of that habitat or community type that occurs in the Project Disturbance Area;

   d. an indication of whether the occurrence has any local or regional significance (e.g., if it exhibits any unusual morphology, occurs at the periphery of its range in California, represents a significant range extension or disjunct occurrence, or occurs in an atypical habitat or substrate);

e. a completed CNDDB field form for every occurrence (i.e., the summed locations of a given species within 0.25 mile distance of another location, consistent with CNDDB methodology), and;

f. two maps: one that depicts the raw GPS data (as collected in the field) on a topographic base map with Project features; and a second map that follows the CNDDB protocol for occurrence mapping, which lumps two or more occurrences of the same species within one-quarter mile or less of each other into one occurrence.

SECTION C: MITIGATION REQUIREMENTS FOR SPECIAL-STATUS PLANTS DETECTED IN THE SUMMER/FALL 2010 SURVEYS

The Project owner shall apply the following avoidance standards to special-status plants that might be detected during late summer/fall season surveys. Avoidance and/or the mitigation measures described in Section D below would reduce impacts to special-status plant species to less than significant levels.

Mitigation for CNDDB Rank S1 and S2 Plants: If species with a CNDDB rank of S1 (CDFG 2010b), excluding small-flowered androstephium (CNDDB S1.2), are detected within the Project Disturbance Area or would be directly impacted by discharges from or the diversion of streams around the Project, the Project owner shall implement avoidance measures to protect at least 75 percent of the local occurrence(s) of the species. For perennial species, ~~T~~the< the> local occurrence(s) shall be measured by the number of individual plants located on the Project site or on public lands contiguous to the project site. For annual species, the occurrence(s) shall be measured as areal extent of contiguous occupied habitat on the site and on contiguous public lands. Avoidance shall include protection of the ecosystem processes essential for maintenance of the protected plant occurrence. Plants located within the ESAs established pursuant to Section A above shall be considered to be "avoided" to the extent that direct impacts on the plants are avoided and that these processes would be maintained. If special status plant occurrences are isolated by the Project from natural fluvial, aeolian, or other processes known to be necessary for their persistence or reproduction, these occurrences shall not be considered "avoided." This evaluation shall be made in consultation among the project Botanist and the CPM, in consultation with CDFG and BLM, on a case by case basis, dependent on the species and its location on the site. The Project owner shall provide compensatory mitigation as described below in Section D for Project impacts to CNDDB Rank S1 and S2 plants that are not avoided. If, after consultation among the project Botanist, CPM, CDFG, and BLM, on-site avoidance is determined not to satisfy the long-term viability of the plant occurrence(s), then compensatory mitigation would be allowed for up to 100% of impacts to Rank S1 and S2 plants on the site, as described below in Section D.

If species with a CNDDB rank of 3 are detected within the Project Disturbance Area, no onsite avoidance or compensatory mitigation shall be required unless the occurrence has local or regional significance, in which case the plant occurrence shall be treated as a CNDDB 2 ranked plant. A plant occurrence would be considered to have local or regional significance if:

a. It occurs at the outermost periphery of its range in California;

b. It occurs in an atypical habitat, region, or elevation for the taxon that suggests that the occurrence may have genetic significance (e.g., that may increase its ability to survive future threats), or;

c. It exhibits any unusual morphology that is not clearly attributable to environmental factors that may indicate a potential new variety or sub-species.

Should CNDDB Rank S3 plant locations meeting any of the three criteria above be found on the project site during summer or fall field surveys, then mitigation requirements for those species shall be as described above for CNDDB Rank S1 and S2 species.

Pre-Construction Notification for State- or Federal-Listed Species, or BLM Sensitive Species. If a state or federal-listed species or BLM Sensitive species is detected, the Project owner shall immediately notify the CDFG, USFWS, BLM, and the CPM.

Preservation of the Germplasm of Affected Special-Status Plants. ~~For all~~<As additional mitigation for the> impacts to CNPS List 1 or List 2 plants, excluding small-flowered androstephium, ~~mitigation~~<the project owner> shall ~~include seed collection~~<collect seeds> from ~~the~~<all available> affected special-status plants on-site prior to construction to conserve the germplasm and provide a seed source for restoration efforts. Seed collection must only be done under permit from the BLM; the project owner shall be responsible for obtaining and complying with applicable permit(s). The seed shall be collected under the supervision or guidance of a reputable seed storage facility such as the Rancho Santa Ana Botanical Garden Seed Conservation Program, San Diego Natural History Museum, or the Missouri Botanical Garden. The costs associated with the long-term storage of the seed shall be the responsibility of the Project owner. Any efforts to propagate and reintroduce special-status plants from seeds in the wild shall be carried out under the direct supervision of specialists such as those listed above and as part of a Habitat Restoration/Enhancement Plan approved by the CPM.< For Phase 1a and 1b, it is recognized that seed collection may not be possible given the timing of approvals and the scheduled initiation of construction. >

SECTION D: OFF-SITE COMPENSATORY MITIGATION FOR SPECIAL-STATUS PLANTS

Where compensatory mitigation is required under the terms of Section C, above, the Project owner shall mitigate Project impacts to CNPS List 1 or List 2 plants, excluding small-flowered androstephium with compensatory mitigation. Compensatory mitigation shall consist of acquisition of habitat supporting the target species, restoration/enhancement of populations of the target species, or a combination of acquisition and restoration/enhancement as provided within this Condition. Compensatory mitigation shall be at a 3:1 ratio. For annual species, compensation shall provide three acres of habitat acquired or restored/enhanced for every acre of special-status plant habitat disturbed by the Project Disturbance Area. For perennial species, compensation lands shall supporting three living plants of the same species for each plant disturbed within the project area. The Project owner shall provide funding for the acquisition and/or restoration/enhancement, initial improvement, and long-term maintenance and management of the acquired or restored lands. The actual costs to comply with this condition will vary depending on the Project Disturbance Area, the actual costs of acquiring compensation habitat, the actual costs of initially improving the habitat, the actual costs of long-term management as determined by a Property Analysis Record (PAR) or PAR-like analysis, and other transactional costs related to the use of compensatory mitigation.

The Project owner shall comply with other related requirements in this condition:

I. **Compensatory Mitigation by Acquisition:** The requirements for the acquisition, initial protection and habitat improvement, and long-term maintenance and management of special-status plant compensation lands include all of the following:

Selection Criteria for Acquisition Lands. The compensation lands selected for acquisition may include any of the following three categories:

1. Occupied Habitat, No Habitat Threats: The compensation lands selected for acquisition shall be occupied by the target plant species and shall be characterized by site integrity and habitat quality that are required to support the target species, and shall be of equal or better habitat quality than that of the affected occurrence.

2. Occupied Habitat, Habitat Threats. Occupied compensation lands characterized by habitat threats may also be acquired as long as the population could be reasonably expected to recover with minor restoration (e.g., OHV or grazing exclusion, pest plant removal) and is accompanied by a Habitat Enhancement/Restoration Plan as described in Section D.II, below.

3. Unoccupied but Adjacent. The Project owner may also acquire habitat for which occupancy by the target species has not been documented, if

the proposed acquisition lands are adjacent to occupied habitat. The Project owner shall provide evidence that acquisitions of such unoccupied lands would improve the defensibility and long-term sustainability of the occupied habitat by providing a protective buffer around the occurrence and by enhancing connectivity with undisturbed habitat.

Review and Approval of Compensation Lands Prior to Acquisition. The Project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for special-status plants in relation to the criteria listed above, and must be approved by the CPM.

Management Plan. The Project owner or approved third party shall prepare a management plan for the compensation lands in consultation with the entity that will be managing the lands. The goal of the management plan shall be to support and enhance the long-term viability of the target special-status plant occurrences. The Management Plan shall be submitted for review and approval to the CPM.

Integrating Special-Status Plant Mitigation with Other Mitigation lands. If all or any portion of the acquired Desert Tortoise, Waters of the State, or other required compensation lands meets the criteria above for special-status plant compensation lands, the portion of the other species' or habitat compensation lands that meets any of the criteria above may be used to fulfill that portion of the obligation for special-status plant mitigation.

Compensation Lands Acquisition Requirements. The Project owner shall comply with the following requirements relating to acquisition of the compensation lands after the CPM, has approved the proposed compensation lands:

a. Preliminary Report. The Project owner, or an approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary or requested documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.

b. Title/Conveyance. The Project owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement, as required by the CPM. Any

transfer of a conservation easement or fee title must be to CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPM. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFG or another entity approved by the CPM. If an entity other than CDFG holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM of the terms of any transfer of fee title or conservation easement to the compensation lands.

c. Initial Protection and Habitat Improvement. The Project owner shall fund activities that the CPM requires for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities are estimated to be $750 per acre ($250 per acre, using the estimated cost per acre for Desert Tortoise mitigation as a best available proxy, at a 3:1 ratio, but actual costs will vary depending on the measures that are required for the compensation lands). A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.

d. Property Analysis Record. Upon identification of the compensation lands, the Project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPM before it can be used to establish funding levels or management activities for the compensation lands.

e. Long-term Maintenance and Management Funding. The Project owner shall provide money to establish an account with non-wasting capital that will be used to fund the long-term maintenance and management

of the compensation lands. The amount of money to be paid will be determined through an approved PAR or PAR-like analysis conducted for the compensation lands. Until an approved PAR or PAR-like analysis is conducted for the compensation lands, the amount of required funding is initially estimated to be $~~4,350~~<2,076> for every acre of compensation lands, using as the best available proxy the estimated cost of $~~1,450~~<692> per acre for Desert Tortoise compensatory mitigation, at a 3:1 ratio. If compensation lands will not be identified and a PAR or PAR-like analysis completed within the time period specified for this payment (see the verification section at the end of this condition), the Project owner shall either: (i) provide initial payment equal to the amount of $~~4,350~~<2,076> multiplied by the number of acres the Project owner proposes to acquire for compensatory mitigation; or (ii) provide security to the Energy Commission under subsection (g), "Mitigation Security," below, in an amount equal to $~~4,350~~<2,076> multiplied by the number of acres the Project owner proposes to acquire for compensatory mitigation. The amount of the required initial payment or security for this item shall be adjusted for any change in the Project Disturbance Area as described above. If an initial payment is made based on the estimated per-acre costs, the Project owner shall deposit additional money as may be needed to provide the full amount of long-term maintenance and management funding indicated by a PAR or PAR-like analysis, once the analysis is completed and approved. If the approved analysis indicates less than $~~4,350~~<2,076> per acquired acre (at a 3:1 ratio) will be required for long-term maintenance and management, the excess paid will be returned to the Project owner. The Project owner must obtain the CPM's approval of the entity that will receive and hold the long-term maintenance and management fund for the compensation lands. The CPM will consult with CDFG before deciding whether to approve an entity to hold the Project's long-term maintenance and management funds.

The Project owner shall ensure that an agreement is in place with the long-term maintenance and management fund holder/manager to ensure the following requirements are met:

i. Interest. Interest generated from the initial capital long-term maintenance and management fund shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action that is approved by the CPM and is designed to protect or improve the habitat values of the compensation lands.

ii. Withdrawal of Principal. The long-term maintenance and management fund principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM or by the approved third-party long-term maintenance and management fund manager, to ensure the continued viability of the species on the compensation lands.

iii. Pooling Long-Term Maintenance and Management Funds. An entity approved to hold long-term maintenance and management funds for the Project may pool those funds with similar non-wasting funds that it holds from other projects for long-term maintenance and management of compensation lands for special-status plants. However, for reporting purposes, the long-term maintenance and management funds for this Project must be tracked and reported individually to the CPM.

f. Other Expenses. In addition to the costs listed above, the Project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to the title and document review costs incurred from other state agency reviews, overhead related to providing compensation lands to CDFG or an approved third party, escrow fees or costs, environmental contaminants clearance, and other site cleanup measures.

g. Mitigation Security. ~~The Project owner shall provide financial assurances to the CPM to guarantee that an adequate level of funding is available to implement any of the mitigation~~<It is anticipated that the mitigation lands required under this condition will be nested in the mitigation lands required under BIO-13 and BIO-17. Therefore, the security required under BIO-13 and BIO-17 is adequate security for the mitigation required under this condition. However, the CPM's use of the security to implement> measures <in this condition, BIO-13 and BIO-17 may not fully satisfy the project owner's obligations under this condition. If it is determined that the mitigation lands acquired under BIO-13 and BIO-17 do not satisfy the requirements of this condition, then the project owner will be >required ~~by this condition that are not completed prior to the start of ground-disturbing Project activities~~<to provide additional security>. Financial assurances shall be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") approved by the CPM. The amount of the Security shall be $~~1 0,5039~~<4,914> per acre of occupied habitat impacted ($~~3,503~~<1,638> per acre, using the estimated cost per acre for Desert Tortoise mitigation as a best available proxy, at a 3:1<:> ratio~~; see **Biological Resources Tables 5 and 7**~~< (see cost estimates in condition BIO-17>) for every acre of habitat supporting the target special-status plant species which is

significantly impacted by the project. The actual costs to comply with this condition will vary depending on the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a PAR or PAR-like ~~anslysis~~< analysis>. Prior to submitting the Security to the CPM, the Project owner shall obtain the CPM's approval of the form of the Security. The CPM may draw on the Security if the CPM determines the Project owner has failed to comply with the requirements specified in this condition. The CPM may use money from the Security solely for implementation of the requirements of this condition. The CPM's use of the Security to implement measures in this condition may not fully satisfy the Project owner's obligations under this condition, and the Project owner remains responsible for satisfying the obligations under this condition if the Security is insufficient. The unused Security shall be returned to the Project owner in whole or in part upon successful completion of the associated requirements in this condition.

h. The Project owner may elect to comply with the requirements in this condition for acquisition of compensation lands, initial protection and habitat improvement on the compensation lands, or long-term maintenance and management of the compensation lands by funding, or any combination of these three requirements, by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF). To use this option, the Project owner must make an initial deposit to the REAT Account in an amount equal to the estimated costs (as set forth in the Security section of this condition) of implementing the requirement. If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the Project owner, the Project owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, and the longterm funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the applicant, the remaining balance shall be returned to the Project owner.

i. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. Agreements to delegate land acquisition to an approved third

party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the Project.

II. **Compensatory Mitigation by Habitat Enhancement/ Restoration:** As an alternative or adjunct to land acquisition for compensatory mitigation the Project owner may undertake habitat enhancement or restoration for the target special-status plant species. Habitat enhancement or restoration activities must achieve protection at a 3:1 ratio as described above, with improvements applied to three acres of habitat for every acre of special-status plant habitat directly or indirectly disturbed by the Project Disturbance Area for annual species; or to habitat supporting three living plants for each individual perennial plant directly or indirectly disturbed by the project. Examples of suitable enhancement projects include but are not limited to the following: i) control unauthorized vehicle use into an occurrence (or pedestrian use if clearly damaging to the species); ii) control noxious weeds that infest or pose an immediate threat to an occurrence; iii) exclude grazing by wild burros or livestock from an occurrence; or iv) restore lost or degraded hydrologic or geomorphic functions critical to the species by restoring previously diverted flows, removing obstructions to the wind sand transport corridor above an occurrence, or increasing groundwater availability for dependent species.

If the Project owner elects to undertake a habitat enhancement project for mitigation, the project must meet the following performance standards: The proposed enhancement project shall achieve rescue of an off-site occurrence that is currently assessed, based on the NatureServe threat ranking system (Master et al. 2009; Morse et al. 2004) with one of the following threat ranks: a) long-term decline >30%; b) an immediate threat that affects >30% of the population, or c) has an overall threat impact that is High to Very High. "Rescue" would be considered successful if it achieves an improvement in the occurrence trend to "stable" or "increasing" status, or downgrading of the overall threat rank to slight or low (from "High" to "Very High").

If the Project owner elects to undertake a habitat enhancement project for mitigation, they shall submit a Habitat Enhancement/ Restoration Plan to the CPM for review and approval, and shall provide sufficient funding for implementation and monitoring of the Plan. The amount of the Security shall be $~~1 0,509~~<4,914> per acre of occupied habitat impacted by the project ($~~3,503~~<1,638> per acre, using the estimated cost per acre for Desert Tortoise mitigation as a best available proxy, at a 3:1 ratio< based on the cost estimates in BIO-17>). The amount of the security may be adjusted based on the actual costs of implementing the enhancement, restoration and monitoring. The

implementation and monitoring of the enhancement/restoration may be undertaken by an appropriate third party such as NFWF, subject to approval by the CPM. The Habitat Enhancement/Restoration Plan shall include each of the following:

1. Goals and Objectives. Define the goals of the restoration or enhancement project and a measurable course of action developed to achieve those goals. The objective of the proposed habitat enhancement plan shall include restoration of a target special-status plant occurrence that is currently threatened with a long-term decline. The proposed enhancement plan shall achieve an improvement in the occurrence trend to “stable” or “increasing” status, or downgrading of the overall threat rank to slight or low (from “High” to “Very High”).

2. Historical Conditions. Provide a description of the pre-impact or historical conditions (before the site was degraded by weeds or grazing or ORV, etc.), and the desired conditions.

3. Site Characteristics. Describe other site characteristics relevant to the restoration or enhancement project (e.g., composition of native and pest plants, topography and drainage patterns, soil types, geomorphic and hydrologic processes important to the site or species.

4. Ecological Factors. Describe other important ecological factors of the species being protected, restored, or enhanced such as total population, reproduction, distribution, pollinators, etc.

5. Methods. Describe the restoration methods that will be used (e.g., invasive exotics control, site protection, seedling protection, propagation techniques, etc.) and the long-term maintenance required. The implementation phase of the enhancement must be completed within five years.

6. Budget. Provide a detailed budget and timeline; develop clear, measurable, objective-driven annual success criteria.

7. Monitoring. Develop clear, measurable monitoring methods that can be used to evaluate the effectiveness of the restoration and the benefit to the affected species. The Plan shall include a minimum of five years of quarterly monitoring, and then annual monitoring for the remainder of the enhancement project, ~~and~~<or> until the performance standards for rescue of a threatened occurrence are met<, whichever occurs first>. At a minimum the progress reports shall include: quantitative measurements of the projects progress in meeting the enhancement project success criteria, detailed description of remedial actions taken or proposed, and contact information for the responsible parties.

8. Reporting Program. The Plan shall ensure accountability with a reporting program that includes progress toward goals and success criteria. Include names of responsible parties.

9. Contingency Plan. Describe the contingency plan for failure to meet annual goals.

10. Long-term Protection. Include proof of long-term protection for the restoration site. For private lands this would include conservations easements or other deed restrictions; projects on public lands must be contained in a Desert Wildlife Management Area, Wildlife Habitat Management Area, or other land use protections that will protect the mitigation site and target species.

SECTION E: CONFORMANCE WITH BLM AND SAN BERNARDINO COUNTY PLANT PROTECTION POLICIES

It is BLM policy to salvage yucca and cactus plants (excluding cholla species, genus *Cylindropuntia)* and transplant them to undisturbed sites within project Rights of Way. The San Bernardino County Plant Protection and Management Ordinance regulates the following where they occur on non-government land (San Bernardino County Code 88.01): desert native plants with stems 2 inches or greater in diameter or 6 feet or greater in height: *Psorothamnus* [*Dalea] spinosa* (smoke tree), *Prosopis* spp. (mesquites), all species of the family Agavaceae (century plants, nolinas, yuccas), creosote rings 10 feet or greater in diameter, all Joshua trees; and any part of any of the following species, whether living or dead: *Olneya tesota* (desert ironwood), all species of the genus *Prosopis* (mesquites), and all species of the genus *Cercidium* (palo verdes). Staff recognizes that the project site is on public land and thus not strictly subject to the County ordinance, but believes the County ordinance establishes an additional mitigation standard that should be applied to the project, as follows:

a. The project owner shall inventory all plants subject to BLM and County policies on the project site that would be removed or damaged by proposed project construction.

b. The project owner shall include salvaged plants or potted nursery stock of any species named in BLM or County policies in on-site revegetation planning and implementation, as described in **BIO-10.** The project owner shall include a Protected Plant Salvage and Replacement Section in the Revegetation Plan, in conformance with BLM. The Section also shall provide for incorporation of salvaged or potted stock of any species identified in the San Bernardino County standards that would be impacted by project development affected. The Section shall be made available for review and approval by the CPM. For salvaged plants, the Section shall include detailed descriptions of proposed

methods to salvage plants; transport them; store them temporarily (as needed); and maintain them in temporary storage (i.e., irrigation, shade protection, etc.).; For both salvaged plants and potted nursery stock, the Section shall include detailed descriptions of proposed planting locations and methods; proposed irrigation and maintenance methods at planting sites; and a monitoring plan to verify survivorship and establishment of the plants for a minimum of five years.

c. Concurrent with any ground-disturbing activities within any phase of the project, the project owner shall implement the Protected Plant Replacement measures as approved by the CPM and BLM's State Botanist.

Verification: The Special-Status Plant Impact Avoidance and Minimization Measures shall be incorporated into the BRMIMP as required under Condition of Certification **BIO-7.**

Implementation of the special-status plant impact avoidance and minimization measures shall be reported in the Monthly Compliance Reports prepared by the Designated Botanist. Within 30 days after completion of Project construction, the Project owner shall provide to the CPM, for review and approval in consultation with the BLM State Botanist, a written construction termination report identifying how measures have been completed.

The Project owner shall submit a monitoring report every year for the life of the project to monitor effectiveness of protection measures for all avoided special-status plants to the CPM and BLM State Botanist. The monitoring report shall include: dates of worker awareness training sessions and attendees, an inventory of the special-status plant occurrences and description of the habitat conditions, an indication of population and habitat quality trends, and description of the remedial action, if warranted and planned for the upcoming year.

Section A. No less than 30 days prior to the start of ground-disturbing activities the Project owner shall submit grading plans and construction drawings depicting the location of Environmentally Sensitive Areas and the Avoidance and Minimization Measures contained in Section A of this Condition. The project owner shall coordinate with the CPM and BLM's Wildlife Biologist to revise and finalize boundaries of the ESAs. The 30 day limit may be reduced by the CPM.

No less than 30 days prior to the start of ground-disturbing activities the Project owner shall submit to the CPM for review and approval, in consultation with the BLM State Botanist, the name and resume of the project's Designated Botanist. If a Designated Botanist needs to be replaced, the specified information of the proposed replacement must be submitted to BLM's Wildlife Biologist and the CPM as soon as possible prior to the termination or release of the Designated Biologist. In an emergency, the project owner shall immediately notify the BLM's Wildlife Biologist and the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated

Botanist is proposed to BLM's Wildlife Biologist and the CPM and for consideration. The 30 day limit may be reduced by the CPM.

No less than 30 days prior to ground-disturbing activities the Project owner shall submit a draft White-margined Beardtongue Impact Avoidance and Minimization Plan to the CPM for review and approval, in consultation with the BLM State Botanist. Implementation of the white-margined beardtongue impact avoidance and minimization measures shall be reported in the Monthly Compliance Reports prepared by the Designated Botanist. Within 30 days after completion of Project construction, the Project owner shall provide to the CPM, for review and approval in consultation with the BLM State Botanist, a written construction termination report identifying how measures have been completed. The 30 day limit may be reduced by the CPM.

The Project owner shall submit a monitoring report every year for the life of the project to monitor effectiveness of protection measures for all avoided white-margined beardtongue ESAs to the CPM and BLM State Botanist. The monitoring report shall include: dates of worker awareness training sessions and attendees, an inventory of the special-status plant occurrences and description of the habitat conditions, an indication of population and habitat quality trends, and description of the remedial action, if warranted and planned for the upcoming year. The project owner shall coordinate with the CPM and BLM's Wildlife Biologist to revise and finalize monitoring reports and all reports described in this section, and shall specifically report any difficulties in meeting the protection goals and cooperatively develop adaptive measures as needed.

Section B. Raw GPS data, metadata, and CNDDB field forms shall be submitted to the CPM within two weeks of the completion of each survey. A preliminary summary of results for the late summer/fall botanical surveys shall also be submitted to the CPM and BLM's State Botanist within two weeks following the completion of the surveys. If surveys are split into more than one period, then a summary letter shall be submitted following each survey period. The Final Summer-Fall Botanical Survey Report, GIS shape files and metadata shall be submitted to the BLM State Botanist and the CPM no less than 30 days prior to the start of ground-disturbing activities. The Final Report shall include a detailed accounting of the acreage of Project impacts to special-status plant occurrences.

Section C. The Project owner shall immediately provide written notification to the CPM, CDFG, USFWS, and BLM if it detects a State- or Federal-Listed Species, or BLM Sensitive Species at any time during its late summer/fall botanical surveys or at any time thereafter through the life of the Project, including conclusion of Project decommissioning.

Prior to construction, the project owner shall provide verification that seed of any special status plants on the project site have collected and conveyed to a facility (as described in this measure) and that suitable long-term funding has been provided by the project owner.

Section D. If compensatory mitigation is required (based upon field survey results and mitigation strategy adopted by the project owner, as described in Sections C and D), no less than 30 days prior to the start of ground-disturbing activities, the Project owner shall submit to the CPM Security adequate to acquire compensatory mitigation lands and/or undertake habitat enhancement or restoration activities, as described in this condition. The 30 day limit may be reduced by the CPM.

No fewer than 90 days prior to acquisition of compensatory mitigation lands, the Project owner shall submit a formal acquisition proposal and draft Management Plan for the proposed lands to the CPM, with copies to CDFG, USFWS, and BLM, describing the parcels intended for purchase and shall obtain approval from the CPM prior to the acquisition. No fewer than 90 days prior to acquisition of compensatory mitigation lands, the Project owner shall submit to the CPM and obtain CPM approval of any agreements to delegate land acquisition to an approved third party, or to manage compensation lands; such agreement shall be executed and implemented within 18 months of the Energy Commission's certification of the Project.

The Project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM of such completion no later than 18 months after the start of Project ground-disturbing activities. If NFWF or another approved third party is being used for the acquisition, the Project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline. If habitat enhancement is proposed, no later than six months following the start of ground-disturbing activities, the Project owner shall obtain CPM approval of the final Habitat Enhancement/Restoration Plan, prepared in accordance with Section D, and submit to the CPM or a third party approved by the CPM Security adequate for long-term implementation and monitoring of the Habitat Enhancement/Restoration Plan.

Enhancement/restoration activities shall be initiated no later than 12 months from the start of construction. The implementation phase of the enhancement project shall be completed within five years of initiation. Until completion of the five-year implementation portion of the enhancement action, a report shall be prepared and submitted as part of the Annual Compliance Report. This report shall provide, at a minimum: a summary of activities for the preceding year and a summary of activities for the following year; quantitative measurements of the Project's progress in meeting the enhancement project success criteria; detailed description of remedial actions taken or proposed; and contact information for the responsible parties.

Within 18 months of ground-disturbing activities, the Project owner shall transfer to the CPM or an approved third party the difference between the Security paid and the actual costs of (1) acquiring compensatory mitigation lands, completing initial protection and habitat improvement , and funding the long-term maintenance and management of compensatory mitigation lands; and/or (2) implementing and providing for the long-term protection and monitoring of habitat enhancement or restoration activities.

Section E. The project owner shall coordinate with the CPM and BLM's Wildlife Biologist to revise and finalize all plans and reports named in this section. Verification and reporting shall be as described in **BIO-10** and shall be included in reports described therein. Within 90 days after completion of each year of project construction, the project owner shall provide to the CPM verification of the numbers or acreage of plants covered in this Condition (i.e., species named in BLM and County policies) which have been removed or salvaged over the course of the year. Annual revegetation reports described in **BIO-10** verification shall include summaries of salvage and planting operations and monitoring results. Compliance reports shall include summaries of written and photographic records of the plan implementation described above. Compliance reports shall be submitted annually for a period not less than 5 years to document irrigation, maintenance, and monitoring results, including plant survival.

MOJAVE FRINGE-TOED LIZARD MITIGATION

BIO-13 The project owner shall provide compensatory land to mitigate for habitat loss and direct impacts to Mojave fringe-toed lizards based on revised estimates of suitable Mojave fringe-toed lizard habitat on-site~~, to be verified by an expert in this animal's ecology~~. The project owner shall provide compensatory mitigation at a 3:1 ratio for impacts to breeding habitat (i.e., dune, sand ramp, or fine-sandy wash habitat), and at a 1:1 ratio for impacts to adjacent suitable foraging and cover habitat, such as thin aeolian sand overlying bajada surfaces, or foraging habitat surrounding the breeding habitat. ~~Staff estimates~~<CEC staff estimated> breeding habitat on site as 21.4 acres, and surrounding suitable foraging and cover habitat (i.e., 45 meter buffer) as 143.3 acres. Therefore, <CEC >staff ~~anticipates~~<anticipated> this condition would require the acquisition and dedication in perpetuity of at ~~a minimum~~ 207.5 acres of habitat. The project owner shall provide funding for the acquisition, initial habitat improvements, and long-term management of the compensation lands, as described below.

Biological Resources Table 17
Mojave Fringe-toed Lizard Compensation Acreage Summary

Habitat Function	Project Impact Acreage	Mitigation Ratio	Compensation Acreage
Foraging and cover	143.3 acres	1:1	143.3 acres
Breeding	21.4 acres	3:1	64.2 acres
Total	164.7 acres		207.5 acres

~~To more accurately assess the extent of breeding habitat and adjacent foraging and cover habitat on the Project site, the Project owner shall provide a delineation of habitat for Mojave fringe-toed lizards to the CPM. The delineation shall be prepared by an expert on the species' ecology, whose qualifications have been approved by the CPM,~~ This compensation acreage may be included ("nested") within the acreage acquired and managed as desert tortoise habitat compensation (Condition of Certification **BIO-17**) only if:

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

- Adequate acreage of qualifying desert tortoise compensation lands also meet the Selection Criteria (below) as habitat for Mojave fringe-toed lizard;

- The desert tortoise habitat compensation lands are acquired and dedicated as permanent conservation lands within ~~18~~<24> months of the start of project construction.

If these two criteria are not met, then the project owner shall provide the required number of acres of Mojave fringe-toed lizard habitat compensation lands, adjusted to reflect the final project footprint and additional delineation of suitable habitat, independent of any compensation land required under other conditions of certification, and shall also provide funding for the initial improvement and long-term maintenance and management of the acquired lands, and shall comply with other related requirements <of >this condition. ~~Costs of these requirements are estimated to be $725,416.25 based on the acquisition of 207.5 acres (see **Biological Resources Tables 5** and **6** for a complete breakdown of estimated costs).~~

~~In lieu of acquiring lands itself, the Project owner may satisfy the requirements of this condition by providing funds for the acquisition to the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described in Section 3.i., below. Funding through the NFWF would require additional administrative costs estimated at $15,744.99, bringing the total required deposit to $741,161.24. See **Biological Resources Table 6,** above. If the Project owner elects to use the REAT Account with NFWF, the Project owner will be responsible for providing sufficient funds to cover actual acquisition costs and fees, even if those costs exceed the estimates in this condition, and will also need to pay NFWF fees to establish and manage the project-specific account for the land transfer and management.~~

~~The actual costs to comply with this condition will vary depending on the final footprint of the Project, the number of acres of Mojave fringe-toed lizard breeding and forging or cover habitat identified in the final delineation of suitable habitat, the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a Property Analysis Report (PAR, 3. d., below). Regardless of actual cost, the project owner shall be responsible for implementing all aspects of this condition.~~

~~The requirements for the acquisition, initial improvement, protection, and long term management of the compensation lands shall include the following:~~

<Funding of this mitigation shall be phased to ensure that appropriate compensation lands and/or funding reflect the phasing of actual project impacts and will ensure that all impacts are fully compensated prior to occurring.>

<COMPENSATORY MITIGATION LAND ACQUISITION>

1. **<Method of Acquisition**. Compensation lands required to meet this condition shall be acquired in whole or in part either:**>**

   <a. By the project owner for donation, as approved by the CPM, to a state or federal land management agency or non-profit land management organization,>

   <b. By BLM with funds provided by the project owner,>

   <c. By a third party approved by the CPM to acquire or donate the lands with funds provided by the project owner, or>

   <d. By the National Fish and Wildlife Foundation (NFWF) with in lieu funds deposited into the Renewable Energy Action Team (REAT) Account.>

<If the project owner chooses to delegate responsibility for acquisition of all or portions of compensation lands to a third party such as a nongovernmental organization supportive of desert habitat conservation, such delegation shall be subject to approval by the CPM, in consultation with the project owner and CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. The CPM shall provide a written response and explanation to the project owner within 30 days of receiving the proposal. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project or initiation of each phase of the project.>

<2. >**Selection Criteria for Compensation Lands**. The compensation lands selected for acquisition to meet Energy Commission requirements shall:

   a. Be sand dune or partially stabilized sand dune habitat with potential to contribute to Mojave fringe-toed lizard habitat connectivity and build linkages between known populations of Mojave fringe-toed lizards and preserve lands with suitable habitat;

   b. Be biologically contiguous to lands currently occupied by Mojave fringe-toed lizard;

   c. Be near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;

   d. Provide quality habitat for Mojave fringe-toed lizard, that has the capacity to regenerate naturally when disturbances are removed;

e. Not have a history of intensive recreational use or other disturbance that might make habitat recovery and restoration infeasible;

f. Not be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration;

g. Not contain hazardous wastes;

h. Have water and mineral rights included as part of the acquisition, unless the CPM, in consultation with CDFG, BLM and USFWS, agrees in writing to the acceptability of land without these rights; and

i. Be on land for which long-term habitat management for Mojave fringe-toed lizard and other native biological resources is feasible.

<These requirements may be adjusted upon mutual agreement with the resource agencies (CEC, CDFG, BLM, and USFWS) depending on the specific lands available and in consideration of larger fringe-toed lizard mitigation efforts.>

~~2.~~<3.> **Review and Approval of Compensation Lands Prior to Acquisition**. ~~The~~<If the project owner assumes responsibility for acquiring the compensation lands, the> project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for Mojave fringe-toed lizard in relation to the criteria listed above and must be approved by the CPM. The CPM will share the proposal with and consult with CDFG, BLM, and the USFWS before deciding whether to approve or disapprove the proposed acquisition.< The CPM shall provide a written response and explanation to the project owner within 30 days of receiving the proposal.>

~~3.~~<4.> **Compensation Lands Acquisition Conditions**: ~~The~~<If the project owner assumes responsibility to acquire the compensation lands to meet Energy Commission and CESA requirements, the> project owner shall comply with the following conditions relating to acquisition of the compensation lands after the CPM, in consultation with CDFG, BLM and the USFWS, ~~have~~<has> approved the proposed compensation lands:

a. Preliminary Report: The Project owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary ~~or requested~~ documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM, in consultation with CDFG, BLM and the USFWS. For conveyances to

the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.

b. Title/Conveyance: The Project owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement as required by the CPM in consultation with CDFG. Any transfer of a conservation easement or fee title must be to CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to BLM or other public agency approved by the CPM in consultation with CDFG. ~~If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFG or another entity approved by the CPM. If an approved non-profit holds a conservation easement, CDFG shall be named a third party beneficiary. If an entity other than CDFG holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM, in consultation with CDFG, of the terms of any transfer of fee title or conservation easement to the compensation lands.~~

c. ~~Initial Habitat Improvement Fund. The Project owner shall fund activities that the CPM, in consultation with the CDFG, USFWS and BLM, requires for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities are estimated at $250 an acre, but will vary depending on the measures that are required for the compensation lands. A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.~~d. Property Analysis Record. Upon identification of the compensation lands, the Project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation

lands. The PAR or PAR-like analysis must be approved by the CPM, in consultation with CDFG, before it can be used to establish funding levels or management activities for the compensation lands.

<5. **Compensation Lands Acquisition Costs**: If the project owner assumes responsibility to acquire all or a part of the compensation lands to meet Energy Commission and CESA requirements, the project owner shall fund the following items in addition to actual land costs:>

<a. Level 1 Environmental Site Assessment,>

<b. Appraisal,>

<c. Closing and Escrow costs,>

<d. Biological survey for determining mitigation value of the land, and>

<e. Agency costs to accept the land.>

<If the project owner uses BLM to acquire all or a portion of the compensation lands, the project owner shall provide the BLM with funds for items a. to e. above as well as actual land costs.>

<If the project owner uses in lieu funds deposited into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF) to acquire some or all of the compensation lands, the project owner shall provide funds for items a. to e. above as well as actual land costs and third party administrative costs. If the Project owner elects to use the REAT Account with NFWF, the Project owner will be responsible for providing sufficient funds to cover actual acquisition costs and fees>

<Estimated costs associated with acquisition of compensation lands are:>

<ESTIMATED LAND ACQUISITION COSTS PER ACRE OR PARCEL>

	<ACQUISITION METHOD>		
<COST ITEM>	**<PROJECT OWNER>**	**<BLM>**	**<REAT/NFWF>**
<Land cost/acre>	<Covered by Owner>	<$500>	<$500>
<Level 1 Environmental Site Assessment / parcel>	<Covered by Owner>	<$3,000>	<$3,000>
<Appraisal/parcel>	<Covered by Owner>	<$5,000>	<$5,000>
<Closing and Escrow Costs/parcel>	<Covered by Owner>	<$5,000>	<$5,000>
<Biological Survey/parcel>	<Covered by Owner>	<$5,000>	<$5,000>
<3rd Party Admin. Costs/parcel>	<$0>	<$0>	<10% of land cost>
<Agency Cost to	<17.6% of land cost>	<17.6% of land cost>	<17.6% of land cost>

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

Accept>			

<These costs are current estimates and shall be modified based on actual costs or with the concurrence of the REAT agencies. The land cost per acre is based on actual acquisition costs by the BLM in San Bernardino County. The number of parcels is estimated based on 640 acres per parcel.>

<TOTAL ESTIMATED LAND ACQUISITION COSTS>

	<ACQUISITION METHOD>		
<COST ITEM>	**<PROJECT OWNER>**	**<BLM>**	**<REAT/NFWF>**
<Acres Purchased>	<207.5>	<207.5>	<207.5>
<Parcels Purchased>	<0.3>	<0.3>	<0.3>
<Land cost>	<$103,750>	<$103,750>	<$103,750>
<Level 1 Environmental Site Assessment>	<$324>	<$973>	<$973>
<Appraisal>	<$811>	<$1,621>	<$1,621>
<Closing and Escrow Costs>	<$811>	<$1,621>	<$1,621>
<Biological Survey>	<$811>	<$1,621>	<$1,621>
<3rd Party Admin. Costs>	<$0>	<$0>	<$5,188>
<Agency Cost to Accept>	<$18,208>	<$0>	<$18,208>
<TOTAL>	<$124,415>	<$127,846>	<$138,169>

<COMPENSATORY MITIGATION LAND IMPROVEMENT>

<1. **Land Improvement Requirements**: The Project owner shall fund activities that the CPM, in consultation with the CDFG, USFWS and BLM, requires for the initial protection and habitat improvement of the compensation lands. These activities will be implemented by the state or federal land management agency or non-profit organization holding the land or their representative. The specific activities will vary depending on the condition and location of the land acquired but may include: ><

- ><Installation of signs,><
- ><Removal of trash, ><
- ><Construction and repair of fences, ><
- ><Surveys of boundaries and property lines,><
- ><Removal of invasive plants, ><
- ><Removal of roads,><
- ><And similar measures to protect habitat and improve habitat quality. >

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

<A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.>

<2. **Compensation Lands Improvement Costs**: Land improvement costs will vary depending on the activities undertaken. The cost of those actions are estimated to be $250 per acre but will vary depending on the measures that are required for the compensation lands. Assuming all of the compensation is met with land acquisition, the total land improvement costs are estimated to cost $51,875. >

<COMPENSATORY MITIGATION LAND LONG-TERM MANAGEMENT>

<1. **Long-term Management Requirements**: Long-term management is required to ensure that the compensation lands are managed and maintained to protect desert tortoise. This may include maintenance of signs, fences, removal of invasive weeds, and elimination of unauthorized use. >

<2. **Long-term Management Plan:** The owner of or the entity responsible for management of the compensation lands shall prepare a Management Plan for the compensation lands. The Management Plan shall reflect site-specific enhancement measures on the acquired compensation lands. The plan shall be submitted for approval of the CPM, in consultation with CDFG, BLM and USFWS.>

<3. **Long-term Management Costs:** For those compensation lands that are donated to or owned by the BLM, the long-term management costs will be determined by BLM in consultation with the CDFG, CEC, and USFWS.>

~~e. Long-Term Maintenance and Management Funding. The~~<For those compensation lands that are donated to or owned by a state land management agency or a non-profit organization, the> Project owner shall provide money to establish an account with a non-wasting capital that will be used to fund the long-term maintenance and management of the compensation lands. The amount of money to be paid will be determined through an approved PAR or PAR-like analysis conducted for the compensation lands. ~~The amount of required funding is initially estimated to be $1,450 for every acre of compensation lands.~~

~~If compensation lands will not be identified and a PAR or PAR-like analysis completed within the time period specified for this payment (see~~

~~the verification section at the end of this condition), the project owner shall provide initial payment of $1,450 an acre for the acres identified in the verified and approved delineation of habitat required by this condition, or if the delineation is not completed, shall provide $300,875 calculated at $1,450 an acre for 207.5 acres or as an alternative to initial payment of funds for long-term maintenance and management, the project owner shall include an amount equal to this initial payment in the security that is provided to the Energy Commission under section 3.h. of this condition. The amount of the required initial payment or security for this item shall be adjusted for any change in the Project footprint as described above. If an initial payment is made based on the estimated per-acre costs, the project owner shall deposit additional money as may be needed to provide the full amount of long-term maintenance and management funding indicated by a PAR or PAR-like analysis, once the analysis is completed and approved. If the approved analysis indicates less than $1,450 an acre will be required for long-term maintenance and management, the excess paid will be returned to the Project owner. The project owner must obtain the CPM's approval of the entity that will receive and hold the long-term maintenance and management fund for the compensation lands.~~ The CPM will consult with <the project owner and >CDFG before deciding whether to approve an entity to hold the project's long-term maintenance and management funds~~. The~~< on any lands. For any compensation lands that are not managed by a federal land management agency, the> CPM, in consultation with <the project owner and >CDFG, ~~may~~<will> designate another <state agency or >non-profit organization to hold the long<->term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity.

If CDFG takes fee title to the compensation lands, CDFG shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFG and with CDFG supervision.

~~The Project owner shall ensure that an agreement is in place with the long-term maintenance and management fee holder/manager to ensure the following conditions:i. Interest.~~

<The long-term maintenance and management fee holder/manager shall be subject to the following conditions:>

<I. Interest. >Interest generated from the initial capital shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action <approved by CDFG

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

>designed to protect or improve the habitat values of the compensation lands.

~~ii~~<II>. Withdrawal of Principal. The long-term maintenance and management fee principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM, in consultation with CDFG, or the approved third-party long-term maintenance and management fee manager to ensure the continued viability of the species on the compensation lands. If CDFG takes fee title to the compensation lands, monies received by CDFG pursuant to this provision shall be deposited in a special deposit fund established solely for the purpose to manage lands in perpetuity unless CDFG designates NFWF or another entity to manage the long-term maintenance and management fee for CDFG.

~~iii~~<III>. Pooling Funds. A CPM- approved non-profit organization qualified to hold long-term maintenance and management fees solely for the purpose to manage lands in perpetuity, may pool the fund with other funds for the operation, management, and protection of the compensation lands for local populations of desert tortoise. However, for reporting purposes, the long-term maintenance and management fee fund must be tracked and reported individually to the <CDFG and >CPM.

~~iv~~<IV>. Reimbursement Fund. The project owner shall provide reimbursement to CDFG or an approved third party for reasonable expenses incurred during title, easement, and documentation review~~; expenses incurred from other State or State-approved federal agency reviews; and overhead related to providing compensation lands.~~

~~f. Other expenses. In addition to the costs listed above, the Project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not limited to title and document review costs, expenses incurred from other state agency reviews, and overhead related to providing compensation lands to CDFG or an approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures.~~

~~g. Management Plan. The project owner shall prepare a Management Plan for the compensation lands in consultation with the entity that will be managing the lands. The Management Plan shall reflect site-specific enhancement measures on the acquired compensation lands. The plan shall be submitted for approval of the CPM, in consultation with CDFG, BLM and USFWS.~~

~~h. Mitigation Security. The Project owner shall provide financial assurances to the CPM with copies of the document(s) to BLM, CDFG and the USFWS, to guarantee that an adequate level of funding is available to implement any of the mitigation measures required by this condition that are not completed prior to the start of ground-disturbing activities. The CPM may use money from the Security solely for implementation of the requirements of this condition. The CPM's use of the security to implement measures in this condition may not fully satisfy the Project owner's obligations under this condition. Security not used to implement mitigation measures shall be returned to the Project owner upon successful completion of the associated requirements in this condition. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security"). Prior to submitting the Security to the CPM, the Project owner shall obtain the CPM's approval, in consultation with CDFG of the form of the Security.~~

<Long-term management on compensatory lands required for the Energy Commission and CESA is estimated to be $692 per acre based on comparable costs. If 207.5 acres are acquired and donated to a state land management agency or non-profit organization for long-term management, the total cost of this activity is estimated to be $51,875. This amount shall be adjusted based on final analysis and/or a PAR analysis.>

<If the compensation lands required for the Energy Commission and CESA are administered with in lieu funds deposited into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), the project owner shall pay the following additional fees:>

<1. Project Specific Account Establishment - $12,000>

<2. Pre-proposal RFP or RFP procession - $30,000>

<3. Management fee for acquisition and enhancement – 3% of all acquisition and enhancement costs>

<4. Management fee for long-term management account – 1% of long-term management costs>

<COMPENSATORY MITIGATION LAND FUNDS>

<1. **Compensation Mitigation Fund**: The project owner shall provide funding for acquisition, improvement, and long-term management of desert tortoise compensation land. The current estimated funding shall be $ based on the costs itemized below and assuming all mitigation is provided by land acquisition and NFWF is responsible for long-term management.

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

This amount shall be updated and verified prior to payment and shall be adjusted to reflect actual costs or more current estimates during phasing.>

<EXAMPLE of TOTAL COMPENSATION LAND COSTS>

	<ACQUISITION METHOD>		
<COST ITEM>	**<PROJECT OWNER>**	**<BLM>**	**<REAT/NFWF>**
<Acres Purchased>	<207.5>	<207.5>	<207.5>
<Parcels Purchased>	<0.3>	<0.3>	<0.3>
<Land Acquisition Cost>	<$124,278>	<$127,846>	<$138,169>
<Land Improvement Cost>	<$51,875>	<$51,875>	<$51,875>
<Long-term Management Cost>	<$143,590>	<$143,590>	<$143,590>
<NFWF Fees>	<$47,163>	<$0>	<$47,581>
<TOTAL>	<$366,855>	<$323,311>	<$381,215>

<2. **Fund Payment**: Because the project is phased, the mitigation funding will also be phased. The phasing of funding will ensure that the security is in place to ensure mitigation for any impact before it occurs. This will be accomplished by requiring funding for all the mitigation necessary to mitigate the impacts associated with a specific phase. Specific payments shall reflect the approach chosen by the project owner for land acquisition and shall include funds for land enhancement and long-term management consistent with the amount of land to be disturbed during each phase. The project owner shall make the following compensatory mitigation payments based on the following project phasing.>

~~Security for the requirements of this condition shall be provided in the amount of $725,416.25 (or ($741,161.24 if~~

<TIME>	**<PROJECT ACTIVITY>**	**<MITIGATION PAYMENT>**
<Phase 1a – October 2010>	<Start of construction, no more than 250 acres of site disturbance activities. (Note: No MFTL habitat will be impacted.)>	<$0>
<Phase 1b >	<Completion on Phase 1 construction (275 MW on 2,077 additional acres) (Note: No MFTL habitat will be impacted.)>	<$0>
<Phase 2>	<Initiation and completion of Phase 2 (575 MW on 3,888 acres)>	<$381,215 less adjustments for land acquisition method, and land improvement costs>

<3. **REAT/NFWF Payment**: If> the project owner elects to ~~use the REAT Account with NFWF pursuant to paragraph 3.h.i. of this condition, below). The security is calculated in part, from the items that follow but adjusted as specified below (consult **Biological Resources Table 14** for the complete breakdown of estimated costs). However, regardless of the~~

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

~~amount of the security or actual cost of implementation, the project owner shall be responsible for implementing all aspects of this condition.~~

~~i. land acquisition costs for compensation land, calculated at $1,000/acre;~~

~~ii. Site assessments, appraisals, biological surveys, transaction closing and escrow costs, calculated as $18,000 total per parcel (presuming 40-acres per parcel)~~

~~iii. Initial site clean-up, restoration, or enhancement, calculated at $250/acre;~~

~~iv. Third-party and agency administrative transaction costs and overhead, calculated as percentages of land cost;~~

~~v. Long-term management and maintenance fund, calculated at $1,450 per acre;~~

~~vi. NFWF fees to establish a project-specific account; manage the sub-account for acquisition and initial site work; and manage the sub-account for long term management and maintenance.The project owner may elect to~~ comply with the requirements in this condition for acquisition ~~of compensation lands~~, initial ~~protection and habitat~~ improvement ~~on the compensation lands, or~~<,> long-term maintenance and management ~~of the compensation lands~~, or any combination of these three requirements~~,~~ by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF)~~. To use this option~~, the Project owner ~~must~~<shall> make an initial deposit to the REAT Account in an amount equal to the estimated costs ~~(as set forth in the Security section of this condition) of implementing the requirement~~<of administering these requirements>.

If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the project owner, the project owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, or the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the applicant, the remaining balance shall be returned to the project owner.

~~The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project.~~

<4. **Security**: The Project owner shall provide financial assurances to the CPM with copies of the document(s) to BLM, CDFG and the USFWS, to guarantee that an adequate level of funding is available to implement the mitigation required by this condition is available prior to the start of ground-disturbing activities for each phase of the project discussed in the described in section 2 immediately above. >

<The CPM may use money from the Security solely for implementation of the requirements of this condition or if nesting of mitigation is obtained, to satisfy the conditions of BIO-12 and BIO-17. The CPM's use of the security to implement measures in this condition may not fully satisfy the Project owner's obligations under this condition. Any amount of the Security that is not used to carry out mitigation shall be returned to the Project owner upon successful completion of the associated requirements in this condition. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security"). Prior to submitting the Security to the CPM, the Project owner shall obtain the CPM's approval, in consultation with CDFG, BLM and the USFWS, of the form of the Security. >

<The amount of the Security shall correspond to the mitigation fund payments described in "fund payment" above.>

<5. **Audit**: The project owner may request the CPM to for an independent audit of the compensatory mitigation funds. >

Verification: The project owner shall provide the CPM with written notice of intent to start ground disturbance at least 30 days prior to the start of ground-disturbing activities on the project site.

If the mitigation actions required under this condition are not completed ~~at least 30 days~~ prior to the start of ground-disturbing activities, the Project owner shall provide the CPM and CDFG with an approved Security ~~(as described above in section 3.h., Mitigation Security)~~ in accordance with this condition of certification ~~no later than~~ 30 days prior to beginning Project ground-disturbing activities<. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security")>. Prior to submitting the Security to the CPM, the

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

project owner shall obtain the CPM's approval, in consultation with CDFG, BLM and the USFWS, of the form of the Security. The project owner, or an approved third party, shall complete and provide written verification to the CPM, CDFG, BLM and USFWS of the compensation lands acquisition and transfer within 18 months of the start of Project ground-disturbing activities.

No later than 12 months after the start of <any phase of >ground-disturbing project activities, the project owner shall submit a formal acquisition proposal to the CPM describing the parcels intended for purchase, and shall obtain approval from the CPM, in consultation with CDFG, BLM and USFWS, prior to the acquisition. If NFWF or another approved third party is handling the acquisition, the project owner shall fully cooperate with the third party to ensure the proposal is submitted within this time period. The project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM, CDFG, BLM and USFWS of such completion, no later than 18 months after the issuance of the Energy Commission Decision. If NFWF or another approved third party is being used for the acquisition, the project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline.

The project owner shall complete and submit to the CPM a PAR or PAR-like analysis no later than 60 days after the CPM approves compensation lands for acquisition< associated with any phase of construction>. The project owner shall fully fund the required amount for long-term maintenance and management of the compensation lands< for that phase of construction> no later than 30 days after the CPM approves a PAR or PAR-like analysis of the anticipated long-term maintenance and management costs of the compensation lands. Written verification shall be provided to the CPM and CDFG to confirm payment of the long-term maintenance and management funds.

No later than 60 days after the CPM determines what activities are required to provide for initial protection and habitat improvement on the compensation lands< for any phase of construction>, the project owner shall make funding available for those activities and provide written verification to the CPM of what funds are available and how costs will be paid. Initial protection and habitat improvement activities on the compensation lands <for that phase of construction >shall be completed, and written verification provided to the CPM, no later than six months after the CPM's determination of what activities are required on the compensation lands.

~~The project owner, or an approved~~<If a> third party~~,~~< is responsible for management of the compensation lands> shall provide the CPM, <they shall provide the >CDFG, BLM and USFWS with a management plan for the compensation lands< associated with any phase of construction> within 180 days of the land or easement purchase, as determined by the date on the title. The CPM, in consultation with CDFG, BLM and the USFWS, shall approve the management plan after its content is acceptable to the CPM.

Within 90 days after completion of all project related ground disturbance, the project owner shall provide to the CPM, CDFG, BLM and USFWS an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during Project construction. This shall be the basis for the final number of acres required to be acquired.

~~If electing to satisfy the requirements of this condition by utilizing the options created by CDFG pursuant to SBX8 34, the Project owner shall notify the Commission that it would like a determination that the Project's in-lieu fee proposal meets CEQA and CESA requirements.~~

GILA MONSTER MITIGATION

BIO-14 Concurrent with Desert Tortoise Clearance surveys (**BIO-15,** below), the project owner shall conduct pre-construction surveys for Gila monsters. If a Gila monster is encountered during clearance surveys or during construction, a qualified biologist experienced with Gila monster survey and capture techniques shall capture and maintain it in a cool (<85 degrees F) environment until it can be released to a safe, suitable area beyond the construction impact zone. The biologist shall coordinate with staff and CDFG biologists in the transport and relocation of any Gila monsters encountered during project surveys, construction, or operation. A written report documenting any Gila monsters relocated shall be provided to the CPM within 30 days of relocation.

Verification: Within 30 days after completion of clearance surveys the Designated Biologist shall submit a report to BLM's Wildlife Biologist, the CPM, USFWS, and CDFG describing implementation and results, including description of any relocation of Gila monsters. The report shall include the number of Gila monsters moved; their state of health, including wounds or visible signs of illness; and the location of relocation.

DESERT TORTOISE CLEARANCE SURVEYS AND EXCLUSION FENCING

BIO-15 The project owner shall undertake appropriate measures to manage the construction site and related facilities in a manner to avoid or minimize impacts to desert tortoise. Methods for clearance surveys, fence specification and installation, tortoise handling, artificial burrow construction, egg handling and other procedures shall be consistent with those described in the USFWS' 2009 *Desert Tortoise Field Manual* <http://www.fws.gov/ventura/speciesinfo/protocols_guidelines> or more current guidance provided by CDFG and USFWS. The project owner shall also implement all terms and conditions described in the Biological Opinion for the Project prepared by USFWS. These measures include, but are not limited to, the following:

1. Desert Tortoise Exclusion Fence Installation. To avoid impacts to desert tortoises, permanent desert tortoise exclusion fencing shall be installed along the permanent perimeter security fence and temporarily installed along the utility corridors at tower locations, laydown areas, or other staging areas. Tortoise exclusion fencing shall also be installed as necessary to prevent tortoises on the southern NAP (not a part) area (between the project site and Interstate-40) to prevent tortoises from entering the highway. If the culvert areas cannot be fenced due to restrictions associated with highway maintenance, the two tortoises would be translocated off the site (see **BIO-1 6).** The proposed alignments for the permanent perimeter fence and utility rights-of-way fencing shall be flagged and surveyed within 24 hours prior to the initiation of fence construction. Clearance surveys of the perimeter fence and utility rights-of-way alignments shall be conducted by the Designated Biologist(s) using techniques approved by the USFWS and CDFG and may be conducted in any season with USFWS and CDFG approval. Biological Monitors may assist the Designated Biologist under his or her supervision with the approval of the CPM, BLM, USFWS, and CDFG. These fence clearance surveys shall provide 100-percent coverage of all areas to be disturbed and an additional transect along both sides of the fence line. 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. 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 the USFWS' 2009 *Desert Tortoise Field Manual.* Any desert tortoise located during fence clearance surveys shall be handled by the Designated Biologist(s) in accordance with the USFWS' 2009 *Desert Tortoise Field Manual.*

    a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed prior to the onset of site clearing and grubbing. Fencing shall also be placed along both sides of any construction access roads within tortoise habitat but outside the fenced construction area, and maintained throughout the construction phase of the project, unless otherwise approved by the CPM, BLM Wildlife Biologist, USFWS, and CDFG. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present.

    b. Fence Material and Installation. The permanent tortoise exclusionary fencing shall be constructed in accordance with the USFWS' 2009 *Desert Tortoise Field Manual* (Chapter 8 – Desert Tortoise Exclusion Fence).

c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises. The gates may be electronically activated to open and close immediately after the vehicle(s) have entered or exited to prevent the gates from being kept open for long periods of time. Cattle grating designed to safely exclude desert tortoise shall be installed at the gated entries to discourage tortoises from gaining entry.

d. Fence Inspections. Following installation of the desert tortoise exclusion fencing for both the permanent site fencing and temporary fencing in the utility corridors, the fencing shall be regularly inspected. If tortoise were moved out of harm's way during fence construction, permanent and temporary fencing shall be inspected at least two times a day for the first 7 days to ensure a recently moved tortoise has not been trapped within the fence. Thereafter, permanent fencing shall be inspected monthly and during and within 24 hours following all major rainfall events. A major rainfall event is defined as one for which surface flow is detectable within the fenced drainage during the storm, or for which channels on-site show any evidence of newly deposited sediments, bank erosion, or channel reworking following the storm. The project owner shall be responsible for monitoring storm flows and changes to channels to evaluate need for fence inspection. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within 48 hours of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing shall be inspected weekly and, where drainages intersect the fencing, during and within 24 hours following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the Designated Biologist shall inspect the area for tortoise.

2. Desert Tortoise Clearance Surveys within the Plant Site. Following construction of the permanent perimeter security fence and the attached tortoise exclusion fence, the permanently fenced power plant site shall be cleared of tortoises by the Designated Biologist, who may be assisted by the Biological Monitors. Clearance surveys shall be conducted in accordance with the USFWS' 2009 *Desert Tortoise Field Manual* (Chapter 6 – Clearance Survey Protocol for the Desert Tortoise – Mojave Population) and shall consist of two surveys covering 100% the project area by walking transects no more than 15-feet apart. If a desert tortoise is located on the second survey, a third survey shall be conducted. Each separate survey shall be walked in a different direction to allow opposing angles of observation. Clearance surveys of the power plant site may only be conducted when tortoises are most active (April through May or September through October). Surveys outside of these time periods

require approval by USFWS and CDFG. Any tortoise located during clearance surveys of the power plant site shall be relocated and monitored in accordance with the Desert Tortoise Translocation Plan (Condition of Certification **BIO-1 6**).

a. Burrow Searches. During clearance surveys all desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined by the Designated Biologist, who may be assisted by the Biological Monitors, to assess occupancy of each burrow by desert tortoises and handled in accordance with the USFWS' 2009 *Desert Tortoise Field Manual.* To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined. Tortoises taken from burrows and from elsewhere on the power plant site shall be translocated as described in the Desert Tortoise Translocation Plan.

b. Burrow Excavation/Handling. All potential desert tortoise burrows located during clearance surveys would be excavated by hand, tortoises removed, and collapsed or blocked to prevent occupation by desert tortoises. All desert tortoise handling and removal, and burrow excavations, including nests, would be conducted by the Designated Biologist, who may be assisted by a Biological Monitor in accordance with the USFWS' 2009 *Desert Tortoise Field Manual.*

3. Monitoring Following Clearing. Following the desert tortoise clearance and removal from the power plant site and utility corridors and initial memo or verbal completion report to BLM's Wildlife Biologist, the CPM, USFWS, and CDFG (below), workers and heavy equipment shall be allowed to enter the project site to perform clearing, grubbing, leveling, and trenching. A Designated Biologist shall monitor clearing and grading activities to find and move tortoises missed during the initial tortoise clearance survey. Should a tortoise be discovered, it shall be translocated as described in the Desert Tortoise Translocation Plan to an area approved by the Designated Biologist.

4. Reporting. The Designated Biologist shall record the following information for any desert tortoises handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled desert tortoise as described in the paragraph below. Desert tortoise moved from within project areas shall be marked and monitored in accordance with the Desert Tortoise Translocation Plan.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Implementation of the measures shall be reported in the Monthly Compliance Reports by the Designated Biologist. Immediately upon completion of clearance surveys and desert tortoise removal from the site, the Designated Biologist shall provide an initial memo or verbal report of the results to BLM's Wildlife Biologist, the CPM, USFWS, and CDFG. Within 30 days after completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to BLM's Wildlife Biologist, the CPM, USFWS, and CDFG describing implementation of each of the mitigation measures listed above and compliance with Gila monster clearance survey (**BIO-14).** The report shall include the desert tortoise survey results, capture and release locations of any relocated desert tortoises, and any other information needed to demonstrate compliance with the measures described above.

DESERT TORTOISE TRANSLOCATION PLAN

BIO-16 The project owner shall develop and implement a final Desert Tortoise Translocation Plan (Plan) in conformance with standards and guidelines described in *Translocation of Desert Tortoises (Mojave Population) From Project Sites: Plan Development Guidance* (USFWS 2010), any more current guidance or recommendations as available from CDFG or USFWS, and meets the approval of USFWS, CDFG, BLM's Wildlife Biologist and the CPM. The goal of the Plan shall be to safely exclude desert tortoises from within the fenced project area and translocate them to suitable habitat capable of supporting them, while minimizing stress and potential for disease transmission. Tortoises to be moved farther than 500 meters shall be tested for disease prior to translocation. The Plan shall include written correspondence with CalTrans indicating whether tortoise exclusion fencing may be installed to prevent tortoises on the southern NAP area (between the project site and Interstate-40) to prevent tortoises from entering the highway. If CalTrans does not permit that fencing, then desert tortoises shall be translocated off the NAP site (see **BIO-1 5).** The final Plan shall be based on the draft Desert Tortoise Translocation Plan prepared by the applicant and shall include all revisions deemed necessary by USFWS, CDFG, BLM'S Wildlife Biologist, and staff. The Plan shall include but not be limited to, a list of the authorized handlers, protocols for disease testing and assessing tortoise health, proposed translocation locations and procedures, schedule of translocations, a habitat assessment of translocation lands, monitoring and reporting, and contingency planning (e.g., handling an injured or diseased tortoise).

Verification: Within 30 days of publication of the Energy Commission License Decision or BLM's Record of Decision/ROW Issuance, whichever comes first, the project owner shall provide BLM's Wildlife Biologist and the CPM with the final version of a Desert Tortoise Translocation Plan that has been reviewed and approved by BLM's Wildlife Biologist and the CPM in consultation with USFWS and CDFG. The plan shall include the locations of the translocation sites. The project owner may not translocate

more than 98 tortoises unless the project owner first provides the CPM with documentation demonstrating that adequate translocation sites have been identified, and obtains CPM approval of those translocation sites. All modifications to the approved Plan shall be made only after approval by BLM's Wildlife Biologist and the CPM, in consultation with USFWS and CDFG.Within 30 days after initiation of translocation activities, the Designated Biologist shall provide to BLM's Wildlife Biologist and the CPM for review and approval, a written report identifying which items of the Plan have been completed, and a summary of all modifications to measures made during implementation of the Plan. Written monthly progress reports shall be provided to the BLM's Wildlife Biologist and CPM for the duration of the Plan implementation, including the duration of monitoring of translocated tortoises.

DESERT TORTOISE COMPENSATORY MITIGATION

BIO-17 To fully mitigate for habitat loss and potential take of desert tortoise, the project owner shall ~~provide compensatory mitigation acreage of 14,365 acres of desert tortoise habitat lands, adjusted to reflect the final project footprint, as specified in~~<acquire, protect, and transfer no fewer than 14,365 acres of desert tortoise habitat lands, shall provide funding for the initial improvement and long-term maintenance and management of the acquired lands for protection of the desert tortoise, and comply with other related requirements of> this condition. This ~~figure~~<acreage> was calculated as follows: a ratio of 1:1 for the entire project area (6,215 acres) and an additional 2:1 ratio for 4,075 acres of the project area north of the BNSF railroad tracks (i.e., a total ratio of 1:1 on 2,140 acres and a total ratio of 3:1 on 4,075 acres). ~~See **Biological Resources Table 18,** below. These impact acreages are to be adjusted to reflect the final project footprint. For purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Calico Solar Project, including all linear project components, as well as undeveloped areas inside the Project's boundaries that will no longer provide viable long-term habitat for the desert tortoise.~~

~~**Biological Resources Table 18**~~
Desert Tortoise Compensation Acreage Summary

Location	Project Impact Acreage	Mitigation < >Ratio	Compensation Acreage
South of BNSF RR	2,140 acres	1:1	2,140 acres
North of BNSF RR	4,075 acres	3:1	12,225 acres
Total	6,215 acres		14,365 acres

~~To satisfy this condition, the project owner shall acquire, protect, and transfer no fewer than 14,365 acres of desert tortoise habitat lands (adjusted to reflect the final Project footprint), and shall also provide funding for the initial improvement and long-term maintenance and management of the acquired lands, and comply with other related requirements of this condition, although a portion of the lands requirement may be satisfied with mitigation provided to BLM, as provided below. Costs of these requirements are estimated to be~~

~~$49,223,057.50 based on the acquisition of 14,365 acres (see **Biological Resources Tables 5** and **7** for a complete breakdown of costs and acreage).~~<Of this compensatory mitigation, 6,215 acres meet requirements of BLM and 8,150 acres represent additional requirements of the State of California. >

~~In lieu of acquiring lands itself, the Project owner may satisfy the requirements of this condition by depositing funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described in Section 3.i., below. If the Project owner elects to use the REAT Account, then the total estimated cost of fulfilling this condition to $50,295, 1 64.23~~**~~$50,325,1 64.23.~~**

~~Funds that the Project owner provides to satisfy BLM's mitigation requirements for the Project will also partially satisfy the requirements of this condition, up to a maximum of 6,215 acres of the 14,365-acre requirement, adjusted to reflect the final project footprint. Mitigation to BLM is expected to be in the form of payment in the amount of staff's estimated cost for the purchase, protection initial improvement, maintenance, and management of 6,215 acres of desert tortoise habitat, ,which BLM will use to implement habitat enhancement measures and other activities it identifies. The remainder of the mitigation requirement, at least 8,150 acres based on an additional 2:1 compensation ratio for the 4,075 project site acres north of the BNSF railroad tracks (adjusted to reflect the final project footprint), shall be acquired, protected, improved, maintained and managed as specified in this condition.~~

~~The actual costs to comply with this condition will vary depending on the final footprint of the Project, the actual costs of acquiring compensation habitat, the costs of initially improving the habitat, and the actual costs of long-term management as determined by a Property Analysis Report (PAR, 3. d., below). The 14,365-acre habitat requirement, and associated funding requirements based on that acreage, will be adjusted up or down if there are changes in the final footprint of the project. Regardless of actual cost, the project owner shall be responsible for implementing all aspects of this condition.~~

~~The requirements for the acquisition, initial improvement, protection, and long term management of the 14,365 acres of compensation lands shall include the following:~~

<These impact acreages shall be adjusted to reflect the final project footprint. For purposes of this condition, the Project footprint means all lands disturbed in the construction and operation of the Calico Solar Project, including all linear project components, as well as undeveloped areas inside the Project's boundaries that will no longer provide viable long-term habitat for the desert tortoise.>

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

<These impact acreages may also be adjusted to reflect approval by BLM to meet their portion of the compensatory mitigation requirements, in whole or in part, through "habitat enhancement actions" rather than the purchase and donation of compensation lands.>

<Funding of this mitigation shall be phased to ensure that appropriate compensation lands and/or funding reflect the phasing of actual project impacts and will ensure that all impacts are fully compensated prior to occurring.>

<COMPENSATORY MITIGATION LAND ACQUISITION>

1. **<Method of Acquisition.** To the extent that these mitigation requirements are met through the purchase of compensation lands, these lands shall be acquired in whole or in part either by:**>**

   <a. The project owner for donation, as approved by the BLM for BLM required mitigation and the CPM for state required mitigation, to a state or federal land management agency or non-profit land management organization.>

   <b. The BLM with funds provided by the project owner, >

   <c. A third party approved by the BLM to acquire or donate the lands with funds provided by the project owner, or>

   <d. The National Fish and Wildlife Foundation (NFWF) with in lieu funds deposited into the Renewable Energy Action Team (REAT) Account.>

   <If the project owner chooses to delegate responsibility for acquisition of all or portions of compensation lands to a third party such as a nongovernmental organization supportive of desert habitat conservation, such delegation shall be subject to approval by the CPM, in consultation with the project owner and CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. The CPM shall indicate their approval or disapproval within 30 days of receipt of the project owner's delegation proposal. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project or initiation of each phase of the project.>

<2. >**Selection Criteria for Compensation Lands**. The compensation lands selected for acquisition to meet <BLM requirements and to meet >Energy Commission and CESA requirements shall be equal to or better than the quality and function of the <desert tortoise >habitat impacted and:

a. ~~be~~<Be> within the Western Mojave Recovery Unit, with potential to contribute to desert tortoise habitat connectivity and build linkages between desert tortoise designated critical habitat, known populations of desert tortoise, and/or other preserve lands;

b. ~~provide~~<Provide> habitat for desert tortoise with capacity to regenerate naturally when disturbances are removed;

c. ~~be~~<Be> near larger blocks of lands that are either already protected or planned for protection, or which could feasibly be protected long-term by a public resource agency or a non-governmental organization dedicated to habitat preservation;

d. ~~be~~<Be> contiguous and biologically connected to lands currently occupied by desert tortoise, ideally with populations that are stable, recovering, or likely to recover;

e. ~~not~~<Not> have a history of intensive recreational use or other disturbance that might cause future ~~erosional~~<erosion> damage or other habitat damage, and make habitat recovery and restoration infeasible;

f. ~~not~~<Not> be characterized by high densities of invasive species, either on or immediately adjacent to the parcels under consideration, that might jeopardize habitat recovery and restoration; and

g. ~~not~~<Not> contain hazardous wastes that cannot be removed to the extent that the site could not provide suitable habitat; and

h. ~~have~~<Have> water and mineral rights included as part of the acquisition, unless the CPM, in consultation with CDFG, BLM and USFWS, agrees in writing to the acceptability of land without these rights.

<These requirements may be adjusted upon mutual agreement with the resource agencies (CEC, CDFG, BLM, and USFWS) depending on the specific lands available and in consideration of larger desert tortoise mitigation efforts.>

~~2.~~<3.> **Review and Approval of Compensation Lands Prior to Acquisition**. ~~The~~<If the project owner assumes responsibility for acquiring the compensation lands to meet Energy Commission and CESA requirements, the> project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for desert tortoise in relation to the criteria listed above and must be approved by the CPM. The CPM will share the

proposal with and consult with CDFG, BLM and the USFWS before deciding whether to approve or disapprove the proposed acquisition.< The CPM shall provide a written response and explanation to the project owner within 30 days of receiving the proposal.>

~~3.~~<4.> **Compensation Lands Acquisition Conditions**: ~~The~~<If the project owner assumes responsibility to acquire the compensation lands to meet Energy Commission and CESA requirements, the> project owner shall comply with the following conditions relating to acquisition of the compensation lands after the CPM, in consultation with CDFG, BLM and the USFWS, ~~have~~<has> approved the proposed compensation lands:

a. Preliminary Report: The Project owner, or approved third party, shall provide a recent preliminary title report, initial hazardous materials survey report, biological analysis, and other necessary ~~or requested~~ documents for the proposed compensation land to the CPM. All documents conveying or conserving compensation lands and all conditions of title are subject to review and approval by the CPM, in consultation with CDFG, BLM and the USFWS. For conveyances to the State, approval may also be required from the California Department of General Services, the Fish and Game Commission and the Wildlife Conservation Board.

b. Title/Conveyance: The Project owner shall acquire and transfer fee title to the compensation lands, a conservation easement over the lands, or both fee title and conservation easement as required by the CPM in consultation with CDFG. Any transfer of a conservation easement or fee title must be to CDFG, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), ~~or~~ to <the >BLM<,> or other public agency approved by the CPM in consultation with CDFG. If an approved ~~non-profit~~<nonprofit> organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFG or another entity approved by the CPM. ~~If an approved non-profit holds a conservation easement, CDFG shall be named a third party beneficiary. If an entity other than CDFG holds a conservation easement over the compensation lands, the CPM may require that CDFG or another entity approved by the CPM, in consultation with CDFG, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM, in consultation with CDFG, of the terms of any transfer of fee title or conservation easement to the compensation lands.~~

c~~. Initial Habitat Improvement Fund. The Project owner shall fund activities that the CPM, in consultation with the CDFG, USFWS and BLM, requires for the initial protection and habitat improvement of the compensation lands. These activities will vary depending on the~~

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

~~condition and location of the land acquired, but may include trash removal, construction and repair of fences, invasive plant removal, and similar measures to protect habitat and improve habitat quality on the compensation lands. The costs of these activities are estimated at $250 an acre, but will vary depending on the measures that are required for the compensation lands. A non-profit organization, CDFG or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFG, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFG takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFG or its designee.d~~. Property Analysis Record. Upon identification of the compensation lands, the Project owner shall conduct a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount of the long-term maintenance and management fund to pay the in-perpetuity management of the compensation lands. The PAR or PAR-like analysis must be approved by the CPM, in consultation with CDFG, before it can be used to establish funding levels or management activities for the compensation lands.

<5. **Compensation Lands Acquisition Costs**: If the project owner assumes responsibility to acquire all or a part of the compensation lands to meet Energy Commission and CESA requirements, the project owner shall fund the following items in addition to actual land costs:>

<a. Level 1 Environmental Site Assessment,>

<b. Appraisal,>

<c. Closing and Escrow costs,>

<d. Biological survey for determining mitigation value of the land, and>

<e. Agency costs to accept the land.>

<If the project owner uses BLM to acquire all or a portion of the compensation lands, the project owner shall provide the BLM with funds for items a. to e. above as well as actual land costs.>

<If the project owner uses in lieu funds deposited into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF) to acquire some or all of the compensation lands, the project owner shall provide funds for items a. to e. above as well as actual land costs and third party administrative costs. The project owner shall provide reimbursement to CDFG or an approved

third party for reasonable expenses incurred during title, easement, and documentation review; expenses incurred by other State or State-approved outside consultants.>

<Estimated costs associated with acquisition of compensation lands are: >

<ESTIMATED LAND ACQUISITION COSTS PER ACRE OR PARCEL>

	<ACQUISITION METHOD>		
<COST ITEM>	**<PROJECT OWNER>**	**<BLM>**	**<REAT/NFWF>**
<Land cost/acre>	<Covered by Owner>	<$500>	<$500>
<Level 1 Environmental Site Assessment / parcel>	<Covered by Owner>	<$3,000>	<$3,000>
<Appraisal/parcel>	<Covered by Owner>	<$5,000>	<$5,000>
<Closing and Escrow Costs/parcel>	<Covered by Owner>	<$5,000>	<$5,000>
<Biological Survey/parcel>	<Covered by Owner>	<$5,000>	<$5,000>
<3rd Party Admin. Costs/parcel>	<$0>	<$0>	<10% of land cost>
<Agency Cost to Accept>	<$17.6% of land cost>	<$17.6% of land cost>	<17.6% of land cost>

<These costs are current estimates and shall be modified based on actual costs or with the concurrence of the REAT agencies. The land cost per acre is based on actual acquisition costs by the BLM in San Bernardino County. The number of parcels are estimated based on 640 acres per parcel.>

<TOTAL ESTIMATED LAND ACQUISITION COSTS (based on agency estimated costs)>

	<ACQUISITION METHOD>		
<COST ITEM>	**<PROJECT OWNER>**	**<BLM>**	**<REAT/NFWF>**
<Acres Purchased>	<14,365>	<14,365>	<14,365>
<Parcels Purchased>	<22.4>	<22.4>	<22.4>
<Land cost>	<Covered by Owner ($7,182,500)>	<$7,182,500>	<$7,182,500>
<Level 1 Environmental Site Assessment>	<Covered by Owner ($22,445)>	<$67,336>	<$67,336>
<Appraisal>	<Covered by Owner ($56,113)>	<$112,227>	<$112,227>
<Closing and Escrow Costs>	<Covered by Owner ($56,113)>	<$112,227>	<$112,227>
<Biological Survey>	<Covered by Owner ($56,113)>	<$112,227>	<$112,227>
<3rd Party Admin. Costs>	<$0>	<$0>	<$718,250>
<Agency Cost to Accept>	<$1,260,529>	<$1,264,120>	<$1,260,529>
<TOTAL>	<$8,600,146>	<$8,850,636>	<$9,565,294>

<COMPENSATORY MITIGATION LAND IMPROVEMENT>

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

<1. **Land Improvement Requirements**: The Project owner shall fund activities that the CPM, in consultation with the CDFG, USFWS and BLM, requires for the initial protection and habitat improvement of the compensation lands. These activities will be implemented by the state or federal land management agency or non-profit organization holding the land or their representative. The specific activities will vary depending on the condition and location of the land acquired but may include: ><

- ><Installation of signs,><
- ><Removal of trash, ><
- ><Construction and repair of fences, ><
- ><Surveys of boundaries and property lines,><
- ><Removal of invasive plants, ><
- ><Removal of roads,><
- ><And similar measures to protect habitat and improve habitat quality. >

<2. **Compensation Lands Improvement Costs**: Land improvement costs will vary depending on the activities undertaken. The cost of those actions may range between $25 per acre to $250 per acre and are estimated to be $250 per acre for this project. >

<Assuming all of the compensation is met with land acquisition, the total land improvement costs are estimated to be $3,591,250. This amount will be reduced to the extent that direct habitat enhancements are used to satisfy some or all of the BLM's compensatory mitigation requirements.>

<COMPENSATORY MITIGATION LAND LONG-TERM MANAGEMENT>

<1. **Long-term Management Requirements**: Long-term management is required to ensure that the compensation lands are managed and maintained to protect desert tortoise. This may include maintenance of signs, fences, removal of invasive weeds, and elimination of unauthorized use. >

<2. **Long-term Management Plan:** The owner of or the entity responsible for the management of the compensation lands shall prepare a Management Plan for the compensation lands. The Management Plan shall reflect site-specific enhancement measures on the acquired compensation lands. The plan shall be submitted for approval of the CPM, in consultation with CDFG, BLM and USFWS.>

<3. **Long-term Management Costs:** For those compensation lands that are donated to or owned by the BLM, the long-term management costs will be determined by BLM in consultation with the CDFG, CEC, and USFWS.>

~~e. Long-Term Maintenance and Management Funding. The~~<For those compensation lands that are donated to or owned by a state land management agency or a non-profit organization, the> Project owner shall provide money to establish an account with a non-wasting capital that will be used to fund the long-term maintenance and management of the compensation lands. The amount of money to be paid will be determined through an approved PAR or PAR-like analysis conducted for the compensation lands. ~~The amount of required funding is initially estimated to be $1,450 for every acre of compensation lands. If compensation lands will not be identified and a PAR or PAR-like analysis completed within the time period specified for this payment (see the verification section at the end of this condition), the Project owner shall either provide initial payment of $20,829,250 calculated at $1,450 an acre for 14,365 acres or the Project owner shall include $20,829,250 to reflect this amount in the security that is provided to the Energy Commission under section 3.h. of this condition. The amount of the required initial payment or security for this item shall be adjusted for any change in the Project footprint as described above. If an initial payment is made based on the estimated per-acre costs, the project owner shall deposit additional money as may be needed to provide the full amount of long-term maintenance and management funding indicated by a PAR or PAR-like analysis, once the analysis is completed and approved. If the approved analysis indicates less than $1,450 an acre will be required for long-term maintenance and management, the excess paid will be returned to the Project owner. The project owner must obtain the CPM's approval of the entity that will receive and hold the long-term maintenance and management fund for the compensation lands.~~

The CPM will consult with <the project owner and >CDFG before deciding whether to approve an entity to hold the project's long-term maintenance and management funds~~. The~~< on any lands. For any compensation lands that are not managed by a federal land management agency, the> CPM, in consultation with <the project owner and >CDFG, ~~may~~<will> designate another <state agency or >non-profit organization to hold the long-term maintenance and management fee if the organization is qualified to manage the compensation lands in perpetuity.

If CDFG takes fee title to the compensation lands, CDFG shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity to manage the long-term maintenance and management fee for CDFG and with CDFG supervision.

~~The Project owner shall ensure that an agreement is in place with the long-term maintenance and management fee holder/manager to ensure the following conditions:i. Interest.~~

<The following conditions shall apply to the long-term maintenance and management funds:>

<I. Interest. >Interest generated from the initial capital shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action approved by CDFG designed to protect or improve the habitat values of the compensation lands.

~~ii~~<II>. Withdrawal of Principal. The long-term maintenance and management fee principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM, in consultation with CDFG, or the approved third-party long-term maintenance and management fee manager to ensure the continued viability of the species on the compensation lands. If CDFG takes fee title to the compensation lands, monies received by CDFG pursuant to this provision shall be deposited in a special deposit fund established solely for the purpose to manage lands in perpetuity unless CDFG designates NFWF or another entity to manage the long-term maintenance and management fee for CDFG.

~~iii~~<III>. Pooling Funds. A CPM- approved non-profit organization qualified to hold long-term maintenance and management fees solely for the purpose to manage lands in perpetuity, may pool the fund with other funds for the operation, management, and protection of the compensation lands for local populations of desert tortoise. However, for reporting purposes, the long-term maintenance and management fee fund must be tracked and reported individually to the CDFG and CPM.

~~iv. Reimbursement Fund. The project owner shall provide reimbursement to CDFG or an approved third party for reasonable expenses incurred during title, easement, and documentation review; expenses incurred from other State or State-approved federal agency reviews; and overhead related to providing compensation lands.~~

~~f. Other expenses. In addition to the costs listed above, the Project owner shall be responsible for all other costs related to acquisition of compensation lands and conservation easements, including but not~~

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

~~limited to title and document review costs, expenses incurred from other state agency reviews, and overhead related to providing compensation lands to CDFG or an approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures.~~

~~g. Management Plan. The project owner shall prepare a Management Plan for the compensation lands in consultation with the entity that will be managing the lands. The Management Plan shall reflect site-specific enhancement measures on the acquired compensation lands. The plan shall be submitted for approval of the CPM, in consultation with CDFG, BLM and USFWS.~~

<Long-term management on compensatory lands is estimated to be $692 per acre based on comparable cases. If 14,365 acres are acquired, the total cost of this activity is estimated to be $9,940,580. This amount shall be adjusted based on final analysis and/or a PAR analysis.>

<If the compensation lands required for the Energy Commission and CESA are administered with in lieu funds deposited into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), the project owner shall pay the following additional fees:>

<1. Project Specific Account Establishment - $12,000>

<2. Pre-proposal RFP or RFP procession - $30,000>

<3. Management fee for acquisition and enhancement – 3% of all acquisition and enhancement costs>

<4. Management fee for long-term management account – 1% of long-term management costs>

<COMPENSATORY MITIGATION LAND FUNDS>

<1. **Compensation Mitigation Fund**: The project owner shall provide funding for acquisition, improvement, and long-term management of desert tortoise compensation land. The current estimated funding shall be $34,523,046 based on the costs itemized below and assuming all mitigation is provided by land acquisition and NFWF is responsible for long-term management. This amount shall be updated and verified prior to payment and shall be adjusted to reflect actual costs or more current estimates during phasing.>

<EXAMPLE of TOTAL COMPENSATION LAND COSTS>

	<ACQUISITION METHOD>		
<COST ITEM>	<PROJECT OWNER>	<BLM>	<REAT/NFWF>

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

<Acres Purchased>	<14,365>	<6215>	<8150>
<Parcels Purchased>	<22.4>	<22.4>	<22.4>
<Land Acquisition Cost>	<$8,600,146>	<$8,850,636>	<$9,565,294>
<Land Improvement Cost>	<$3,591,250>	<$3,591,250>	<$3,591,250>
<Long-term Management Cost>	<$9,940,580>	<$9,940,580>	<$9,940,580>
<NFWF Fees>	<$399,410>	<$0>	<$428,365>
<TOTAL>	<$22,531,386>	<$22,382,466>	<$23,525,489>

<2. **Fund Payment**: Because the project is phased, the mitigation funding will also be phased. The phasing of funding will ensure that the security is in place to ensure mitigation for any impact before it occurs. This will be accomplished by requiring funding for all the mitigation necessary to mitigate the impacts associated with a specific phase. Specific payments shall reflect the approach chosen by the project owner for land acquisition and shall include funds for land enhancement and long-term management consistent with the amount of land to be disturbed during each phase. The project owner shall make the following compensatory mitigation payments based on the following project phasing:>

<TIME>	**<PROJECT ACTIVITY>**	**<MITIGATION PAYMENT>**
<Phase 1a – October 2010>	<Start of desert tortoise translocation followed by no more than 250 acres of site disturbance activities to be mitigated at a 3:1 ratio for a total of 750 acres or 1.2 parcels>	<$1,268,078>
<Phase 1b (Estimated to occur after the Close of Financing during the 1st quarter 2011)>	<Completion on Phase 1 construction of 275 MW on an 2,077 additional acres to be mitigated at a 3:1 ratio for a total of 6,231 additional acres or 9.7 parcels>	<$10,186,260 less adjustments from phase 1a and for phase 1 b for land acquisition method, and land improvement, long-term management costs, and habitat enhancement actions>
<Phase 2>	<Initiation and completion of Phase 2 (575 MW on 3,888 acres)>	<$12,071,151 less adjustments from phase 1 b for habitat enhancement actions, land acquisition method, and land improvement costs>

<3. **REAT/NFWF Payment**: If the project owner elects to comply with the requirements in this condition for acquisition, initial improvement, long-term maintenance and management, or any combination of these three requirements by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), the Project owner shall make an initial deposit to the REAT Account in an amount equal to the estimated costs of administering these requirements. >

<If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the project owner, the project owner shall make an

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, or the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the applicant, the remaining balance shall be returned to the project owner.>

h. ~~Mitigation~~ <4. >**Security**~~.~~<:> The Project owner shall provide financial assurances to the CPM with copies of the document(s) to BLM, CDFG and the USFWS, to guarantee that an adequate level of funding is available to implement ~~any of~~ the mitigation ~~measures~~ required by this condition ~~that are not completed~~<is available> prior to the start of ground-disturbing activities <for each phase of the project discussed in the >described in ~~Section A of this condition~~<section 2 immediately above>.

The CPM may use money from the Security solely for implementation of the requirements of this condition~~.~~< or if nesting of mitigation is obtained, to satisfy the conditions of BIO-12 and BIO-13.> The CPM's use of the security to implement measures in this condition may not fully satisfy the Project owner's obligations under this condition. Any amount of the Security that is not used to carry out mitigation shall be returned to the Project owner upon successful completion of the associated requirements in this condition. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security"). Prior to submitting the Security to the CPM, the Project owner shall obtain the CPM's approval, in consultation with CDFG, BLM and the USFWS, of the form of the Security.

~~Security for the requirements of this condition shall be provided in the amount of $49,223,057.50 **(**or ($50,295,164.23 **$50,325,164.23** if the project owner elects to use the REAT Account with NFWF pursuant to paragraph 3.h.i. of this condition, below). The Security is calculated in part, from the items that follow but adjusted as specified below (consult **Biological Resources Tables 5** and **7** for the complete breakdown of estimated costs). However, regardless of the amount of the security or actual cost of implementation, the project owner shall be responsible for implementing all aspects of this condition.~~

~~i. land acquisition costs for compensation land, calculated at $1,000/acre;~~

~~ii. Site assessments, appraisals, biological surveys, transaction closing and escrow costs, calculated as $18,000 total per parcel (presuming 40-acres per parcel);~~

~~iii. Initial site clean-up, restoration, or enhancement, calculated at $250/acre;~~

~~iv. Third-party and agency administrative transaction costs and overhead, calculated as percentages of land cost;~~

~~v. Long-term management and maintenance fund, calculated at $1,450 per acre;~~

~~vi. NFWF fees to establish a project-specific account; manage the sub-account for acquisition and initial site work; and manage the sub-account for long term management and maintenance.~~

~~i. The project owner may elect to comply with the requirements in this condition for acquisition of compensation lands, initial protection and habitat improvement on the compensation lands, or long-term maintenance and management of the compensation lands by funding, or any combination of these three requirements, by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF). To use this option, the Project owner must make an initial deposit to the REAT Account in an amount equal to the estimated costs (as set forth in the Security section of this condition) of implementing the requirement. If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the project owner, the project owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, or the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the applicant, the remaining balance shall be returned to the project owner. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project.~~

<The amount of the Security shall correspond to the mitigation fund payments described in "fund payment" above.>

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

<5. **Audit**: The project owner may request the CPM to for an independent audit of the compensatory mitigation funds. >

Verification: The project owner shall provide the CPM with< a description of the phasing of the project's construction and ground disturbing activities at least 30 days prior to ground disturbing activities. >

<The project owner shall provide> written notice of intent to start ground disturbance <for any phase of project construction >at least 30 days prior to the start of ~~ground-disturbing~~<those> activities on the project site.

If the mitigation actions required under this condition are not completed ~~at least 30 days~~ prior to the start of ground-disturbing activities, the Project owner shall provide the CPM and CDFG with an approved Security in accordance with this condition of certification ~~no later than 30 days~~ prior to beginning Project ground-disturbing activities. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security"). Prior to submitting the Security to the CPM, the project owner shall obtain the CPM's approval, in consultation with CDFG, BLM and the USFWS, of the form of the Security. The project owner, or an approved third party, shall complete and provide written verification to the CPM, CDFG, BLM and USFWS of the compensation lands acquisition and transfer within 18 months of the start of Project ground-disturbing activities.

No later than 12 months after the start of <any phase of >ground-disturbing project activities, the project owner shall submit a formal acquisition proposal to the CPM describing the parcels intended for purchase, and shall obtain approval from the CPM, in consultation with CDFG, BLM and USFWS, prior to the acquisition. If NFWF or another approved third party is handling the acquisition, the project owner shall fully cooperate with the third party to ensure the proposal is submitted within this time period. The project owner or an approved third party shall complete the acquisition and all required transfers of the compensation lands, and provide written verification to the CPM, CDFG, BLM and USFWS of such completion, no later than 18 months after the issuance of the Energy Commission Decision. If NFWF or another approved third party is being used for the acquisition, the project owner shall ensure that funds needed to accomplish the acquisition are transferred in timely manner to facilitate the planned acquisition and to ensure the land can be acquired and transferred prior to the 18-month deadline.

The project owner shall complete and submit to the CPM a PAR or PAR-like analysis no later than 60 days after the CPM approves compensation lands for acquisition< associated with any phase of construction>. The project owner shall fully fund the required amount for long-term maintenance and management of the compensation lands< for that phase of construction> no later than 30 days after the CPM approves a PAR or PAR-like analysis of the anticipated long-term maintenance and management costs of the compensation lands. Written verification shall be provided to the CPM and CDFG to confirm payment of the long-term maintenance and management funds.

No later than 60 days after the CPM determines what activities are required to provide for initial protection and habitat improvement on the compensation lands< for any phase of construction>, the project owner shall make funding available for those activities and provide written verification to the CPM of what funds are available and how costs will be paid. Initial protection and habitat improvement activities on the compensation lands <for that phase of construction >shall be completed, and written verification provided to the CPM, no later than six months after the CPM's determination of what activities are required on the compensation lands.

The ~~project owner, or an approved third party~~<land management entity>, shall provide the CPM, CDFG, BLM and USFWS with a management plan for the compensation lands <associated with any phase of construction >within~~1 80~~< 180> days of the land or easement purchase, as determined by the date on the title. The CPM, in consultation with CDFG, BLM and the USFWS, shall approve the management plan after its content is acceptable to the CPM.

Within 90 days after completion of all project related ground disturbance, the project owner shall provide to the CPM, CDFG, BLM and USFWS an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during Project construction. This shall be the basis for the final number of acres required to be acquired.

RAVEN MONITORING, MANAGEMENT, AND CONTROL PLAN

BIO-18 The project owner shall design and implement a Raven Monitoring, Management, and Control Plan (Raven Plan) that is consistent with the most current USFWS-approved raven management guidelines and that meets the approval of the USFWS, CDFG, and the CPM. Any subsequent modifications to the approved Raven Plan shall be made only with approval of the CPM in consultation with USFWS and CDFG. The Raven Plan shall include but not be limited to a program to monitor increased raven presence in the Project vicinity and to implement raven control measures as needed based on that monitoring. The purpose of the plan is to avoid any Project-related increases in raven numbers during construction, operation, and decommissioning. The threshold for implementation of raven control measures shall be any increases in raven numbers from baseline conditions, as detected by monitoring to be proposed in the Raven Plan. Regardless of raven monitoring results, the project owner shall be responsible for all other aspects of the Raven Plan, including avoidance and minimization of project-related trash, water sources, or perch/roost sites that could contribute to increased raven numbers. In addition, to offset the cumulative contributions of the Project to desert tortoise from increased raven numbers, the Project owner shall also contribute to the USFWS Regional Raven Management Program. The Project owner shall do all of the following:

1. Prepare and Implement a Raven Management Plan that includes the following:

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, and;

e. Discuss reporting requirements.

2. Contribute to the USFWS Regional Raven Management Program. The project owner shall submit ~~payment~~<a one-time or annual payments> to the project sub-account of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the USFWS Regional Raven Management Program. The amount ~~shall be a~~<of the> one-time payment ~~of~~<shall be> $105 per acre of permanent disturbance ~~and a 2% fund management fee ($652,175) totaling $665,626.50.~~<($652,175). If property owner chooses to make annual payments instead of the one-time payment, the annual payment per acre of permanent disturbance shall be calculated each year and the initial annual payment shall be $7.50 per acre of permanent disturbance.>

Verification: No later than 30 days prior to the start of construction, the project owner shall provide written verification to the CPM that NFWF has received and accepted payment into the project's sub-account of the REAT Account to support the USFWS Regional Raven Management Program.

No later than 30 days prior to any construction-related ground disturbance activities, the Project owner shall provide the CPM, USFWS, and CDFG with the final version of a Raven Plan. All modifications to the approved Raven Plan shall be made only with approval of the CPM in consultation with USFWS and CDFG.

Within 30 days after completion of Project construction, the Project owner shall provide to the CPM for review and approval, a written report identifying which items of the Raven Plan have been completed, a summary of all modifications to mitigation measures made during the Project's construction phase, and which items are still outstanding.

On January 31st of each year following construction the Designated Biologist shall provide a report to the CPM that includes: a summary of the results of raven management and control activities for the year; a discussion of whether raven control and management goals for the year were met; and recommendations for raven management activities for the upcoming year.

PRE-CONSTRUCTION NEST SURVEYS AND IMPACT AVOIDANCE MEASURES FOR MIGRATORY BIRDS

BIO-19 Pre-construction nest surveys shall be conducted each year during the construction phase of the project if construction activities will occur during the breeding period (from January 1 through August 1). The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors who have demonstrated experience conducting nest searches; are knowledgeable of the nesting habitats of species that may nest on the site; and are familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). Surveys shall be conducted in accordance with the following guidelines. Nothing in this condition requires the project owner to conduct burrowing owl surveys by entering private lands adjacent to the project site when the project owner has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission. In this situation only, the project owner may substitute binocular surveys for protocol field surveys.

1. Surveys shall cover all potential nesting habitat in the project site and within 500 feet of the boundaries of the plant site and linear facilities;

2. At least two pre-construction 100-percent coverage surveys shall be conducted of each proposes construction area, separated by a minimum 10-day interval. One of the surveys shall be conducted within the 10 days preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed one week in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;

3. If active nests are detected during the survey, a 500 foot no-disturbance buffer zone shall be implemented and a monitoring plan shall be developed. This protected area surrounding the nest may be adjusted by the Designated Biologist in consultation with CDFG, BLM, USFWS, and CPM. Nest locations shall be mapped using GPS technology and the location data provided in completion reports (below) to the CPM and BLM Wildlife Biologist; and

4. The Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed. Monitoring shall avoid disturbing the nests or causing an increased risk of predation. Activities that might, in the opinion of the Designated Biologist and in consultation with the CPM and BLM, disturb nesting activities shall be prohibited within the buffer zone until such a determination is made.

Verification: Upon completion of the surveys, and prior to initiating any vegetation removal or ground-disturbing activities (i.e., no more than 10 days prior to the start of such activities), the project owner shall provide the CPM and BLM a letter-report

describing the methods and findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor(s); and a list of species observed. If active nests are detected during the survey, the report shall include a map or aerial photo identifying the location of the nest and shall depict the boundaries of the no-disturbance buffer zone around the nest.

PRE-CONSTRUCTION SURVEYS FOR GOLDEN EAGLES

BIO-20 The Project owner shall implement the following measures to avoid or minimize Project-related construction impacts to golden eagles.

1. Annual Inventory During Construction. For each calendar year during which construction will occur an inventory shall be conducted to determine if golden eagle territories occur within one mile of the Project boundaries. Survey methods and surveyor qualifications for the inventory shall be as described in the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (Pagel et al. 2010) or more current guidance from the USFWS.

2. Inventory Data: Data collected during the inventory shall include at least the following: territory status (unknown, vacant, occupied, breeding successful, breeding unsuccessful); nest location, nest elevation; age class of golden eagles observed; nesting chronology; number of young at each visit; digital photographs; and substrate upon which nest is placed.

3. Determination of Unoccupied Territory Status: A nesting territory or inventoried habitat shall be considered unoccupied by golden eagles only after completing at least two full surveys in a single breeding season.

4. Monitoring and Adaptive Management Plan: If an occupied nest[2] is detected within one mile of the Project boundaries, the Project owner shall prepare and implement a Golden Eagle Monitoring and Management Plan for the duration of construction to ensure that Project construction activities do not result in injury or disturbance to golden eagles. The monitoring methods shall be consistent with those described in the Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (Pagel et al. 2010) or more current guidance from the USFWS. The Monitoring and Management Plan shall be prepared in consultation with the USFWS. Triggers for adaptive management shall include any evidence of Project-related disturbance to nesting golden eagles, including but not limited to: agitation behavior (displacement, avoidance, and defense); increased vigilance behavior at nest sites; changes in foraging and feeding behavior, or nest site abandonment. The monitoring and Management Plan shall include a description of adaptive management actions, which shall include, but not be limited to, cessation of construction activities that are deemed by the Designated Biologist to be the source of golden eagle disturbance.

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

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

BURROWING OWL IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-21 The Project owner shall implement the following measures to avoid, minimize and offset impacts to burrowing owls. Nothing in this condition requires the project owner to conduct burrowing owl surveys by entering private lands adjacent to the project site when the project owner has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission. In this situation only, the project owner may substitute binocular surveys for protocol field surveys.

1. Pre-Construction Surveys. The Designated Biologist or Biological Monitor shall conduct pre-construction surveys for burrowing owls no more than 30 days prior to initiation of construction activities. Surveys shall be focused exclusively on detecting burrowing owls, and shall be conducted from two hours before sunset to one hour after or from one hour before to two hours after sunrise. The survey area shall include the Project Disturbance Area and surrounding 500 foot survey buffer.

2. Implement Avoidance Measures. If an active burrowing owl burrow is detected within 500 feet from the Project Disturbance Area the following avoidance and minimization measures shall be implemented:

    a. Establish Non-Disturbance Buffer. Fencing shall be installed at a 250-foot radius from the occupied burrow to create a non-disturbance buffer around the burrow. The non-disturbance buffer and fence line may be reduced to 160 feet if all Project-related activities that might disturb burrowing owls would be conducted during the non-breeding season (September 1st through January 31st). Signs shall be posted in English and Spanish at the fence line indicating no entry or disturbance is permitted within the fenced buffer.

    b. Monitoring: If construction activities would occur within 500 feet of the occupied burrow during the nesting season (February 1 – August 31st) the Designated Biologist or Biological Monitor shall monitor to

determine if these activities have potential to adversely affect nesting efforts, and shall implement measures to minimize or avoid such disturbance.

3. Passive Relocation of Burrowing Owls. If pre-construction surveys indicate the presence of burrowing owls within the Project Disturbance Area (the Project Disturbance Area means all lands disturbed in the construction and operation of the Genesis Project), the Project owner shall prepare and implement a Burrowing Owl Relocation and Mitigation Plan, in addition to the avoidance measures described above. The final Burrowing Owl Relocation and Mitigation Plan shall be approved by the CPM, in consultation with USFWS, BLM and CDFG, and shall:

   a. Identify and describe suitable relocation sites within 1 mile of the Project Disturbance Area, and describe measures to ensure that burrow installation or improvements would not affect sensitive species habitat or existing burrowing owl colonies in the relocation area;

   b. Provide guidelines for creation or enhancement of at least two natural or artificial burrows per relocated owl, including a discussion of timing of burrow improvements, specific location of burrow installation, and burrow design. Design of the artificial burrows shall be consistent with CDFG guidelines (CDFG 1995) and shall be approved by the CPM in consultation with CDFG, BLM and USFWS;

   c. Passive relocation sites shall be in areas of suitable habitat for burrowing owl nesting, and be characterized by minimal human disturbance and access. Relative cover of non-native plants within the proposed relocation sites shall not exceed the relative cover of non-native plants in the adjacent habitats;

   d. Provide detailed methods and guidance for passive relocation of burrowing owls occurring within the Project Disturbance Area; and

4. Acquire Compensatory Mitigation Lands for Burrowing Owls. The following measures for compensatory mitigation shall apply only if burrowing owls that are detected within the Project Disturbance Area. The Project owner shall acquire, in fee or in easement, 19.5 acres of land for each burrowing owl that is displaced by construction of the Project. This compensation acreage of 19.5 acres per single bird or pair of nesting owls assumes that there is no evidence that the compensation lands are occupied by burrowing owls. If burrowing owls are observed to occupy the compensation lands, then only 9.75 acres per single bird or pair is required, per CDFG (1995) guidelines. If the compensation lands are contiguous to currently occupied habitat, then the replacement ratio will be 13.0 acres per pair or single bird. The Project owner shall provide funding for the enhancement and long-term management of these compensation

lands. The acquisition and 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. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. In lieu of acquiring lands itself, the Project owner may satisfy the requirements of this condition by depositing funds into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described in Section 3.i. of Condition of Certification BIO-17.

a. Criteria for Burrowing Owl Mitigation Lands. The terms and conditions of this acquisition or easement shall be as described in Paragraph 1 of **BIO-17** [Desert Tortoise Compensatory Mitigation], with the additional criteria to include: 1) the mitigation land must provide suitable habitat for burrowing owls, and 2) the acquisition lands must either currently support burrowing owls or be within dispersal distance from an active burrowing owl nesting territory (generally approximately 5 miles). The burrowing owl mitigation lands may be included with the desert tortoise mitigation lands ONLY if these two burrowing owl criteria are met. If the burrowing owl mitigation land is separate from the acquisition required for desert tortoise compensation lands, the Project owner shall fulfill the requirements described below in this condition.

b. Security. If burrowing owl mitigation land is separate from the acreage required for desert tortoise compensation lands the Project owner or an approved third party shall complete acquisition of the proposed compensation lands prior to initiating ground-disturbing Project activities. Alternatively, financial assurance can be provided by the Project owner to the CPM with copies of the document(s) to CDFG, BLM and the USFWS, to guarantee that an adequate level of funding is available to implement the mitigation measure described in this condition. These funds shall be used solely for implementation of the measures associated with the Project. Financial assurance can be provided to the CPM in the form of an irrevocable letter of credit, a pledged savings account or another form of security ("Security") prior to initiating ground-disturbing Project activities. Prior to submittal to the CPM, the Security shall be approved by the CPM, in consultation with CDFG, BLM and the USFWS to ensure funding. The estimated costs of enhancement and endowment ~~(see subsection C.2.4.2, Desert Tortoise, for a discussion of the assumptions used in calculating the Security, which are based on an estimate of $3501.23 per acre to fund acquisition, enhancement, and long-term management).~~<are discussed in condition BIO-17.> The final amount due will be determined by the PAR analysis conducted pursuant to **BIO-17.**

Verification: If pre-construction surveys detect burrowing owls within 500 feet of proposed construction activities, the Designated Biologist shall provide to the CPM, BLM, CDFG and USFWS documentation indicating that non-disturbance buffer fencing has been installed at least 10 days prior to the start of any construction-related ground disturbance activities. The Project owner shall report monthly to the CPM, CDFG, BLM and USFWS for the duration of construction on the implementation of burrowing owl avoidance and minimization measures. Within 30 days after completion of construction the Project owner shall provide to the CPM, BLM, CDFG and USFWS a written construction termination report identifying how mitigation measures described in the plan have been completed.

If pre-construction surveys detect burrowing owls within the Project Disturbance Area, the Project owner shall notify the CPM, BLM, CDFG and USFWS no less than 10 days of completing the surveys that a relocation of owls is necessary. The Project owner shall do all of the following if relocation of one or more burrowing owls is required:

a. Within 30 days of completion of the burrowing owl pre-construction surveys, submit to the CPM, CDFG and USFWS a Burrowing Owl Relocation and Mitigation Plan.

b. No less than 90 days prior to acquisition of the burrowing owl compensation lands, the Project owner, or an approved third party, shall submit a formal acquisition proposal to the CPM, CDFG, and USFWS describing the 39-acre parcel intended for purchase. At the same time the Project owner shall submit a PAR or PAR-like analysis for the parcels for review and approval by the CPM, CDFG and USFWS.

c. Within 90 days of the land or easement purchase, as determined by the date on the title, the Project owner shall provide the CPM with a management plan for review and approval, in consultation with CDFG, BLM and USFWS, for the compensation lands and associated funds.

d. No later than 30 days prior to the start of construction-related ground disturbing activities, the Project owner shall provide written verification of Security in accordance with this condition of certification.

e. No later than 18 months after the start of construction-related ground disturbance activities, the Project owner shall provide written verification to the CPM, BLM, CDFG and USFWS that the compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient.

f. On January 31st of each year following construction for a period of five years, the Designated Biologist shall provide a report to the CPM, USFWS, BLM and CDFG that describes the results of monitoring and management of the burrowing owl relocation area. The annual report shall provide an assessment of the status of the relocation area with respect to burrow function and weed infestation, and shall include recommendations for actions the following year for maintaining the burrows as functional burrowing owl nesting sites and minimizing the occurrence of weeds.

AVIAN PROTECTION PLAN / MONITORING BIRD IMPACTS FROM SOLAR TECHNOLOGY

BIO-22 The project owner shall prepare and implement an Avian Protection Plan to monitor bird collisions with facility features (study described below). The Project owner shall use the monitoring data to inform and develop an adaptive management program that would avoid and minimize Project-related avian impacts. Project-related bird deaths or injuries shall be reported to the CPM, CDFG and USFWS. The CPM, in consultation with CDFG and USFWS, shall determine if the Project-related bird deaths or injuries warrant implementation of adaptive management measures contained in the Avian Protection Plan. The study design for the Avian Protection Plan shall be approved by the CPM in consultation with CDFG and USFWS, and, once approved, shall be incorporated into the project's BRMIMP and implemented. The Plan shall include adaptive management strategies that include the placement of bird flight diverters, aerial markers, or other strategies to minimize collisions with the SunCatcher units.

The Avian Protection Plan shall include 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 BLM's Wildlife Biologist and the CPM in consultation with CDFG and USFWS, and shall be incorporated into the project's BRMIMP and implemented. The Bird Monitoring Study shall be based upon prior studies by McCrary et al. (1986) or other applicable literature, and 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 and proposed disposition of dead or injured birds.

Verification: No more than 30 days following the publication of the Energy Commission License Decision or BLM's Record of Decision/ROW Issuance, whichever comes first, the project owner shall submit to the CPM, BLM's Wildlife Biologist, USFWS and CDFG a final Avian Protection Plan. Modifications to the Avian Protection Plan shall be made only after approval from BLM's Wildlife Biologist and the CPM.

For one year following the beginning of power plant operation, the Designated Biologist shall submit quarterly reports to BLM's Wildlife Biologist , CPM, CDFG, and USFWS describing the methods, dates, durations, and results of monitoring. The quarterly reports shall provide a detailed description of any project-related bird or wildlife deaths or injuries detected during the monitoring study or at any other time. Following the completion of the fourth quarter of monitoring the Designated Biologist shall prepare an Annual Report that summarizes the year's data, analyzes any project-related bird fatalities or injuries detected, and provides recommendations for future monitoring and any adaptive management actions needed. The Annual Report shall be provided to the

CPM, BLM's Wildlife Biologist, CDFG, and USFWS. Quarterly reporting shall continue until BLM's Wildlife Biologist and the CPM, in consultation with CDFG and USFWS determine whether more years of monitoring are needed, and whether mitigation and adaptive management measures are necessary. After the Bird Monitoring Study is determined by BLM's Wildlife Biologist and the CPM to be complete, the project owner or contractor shall prepare a paper that describes the study design and monitoring results to be submitted to the CPM, BLM's Wildlife Biologist, CDFG, USFWS, and a peer-reviewed scientific journal. Proof of submittal shall be provided to BLM's Wildlife Biologist and the CPM within one year of concluding the monitoring study.

NELSON'S BIGHORN SHEEP MITIGATION

BIO-23 The Designated Biologist or Biological Monitor shall be responsible for daily binocular scans of the project area and surrounding hills and bajadas to search for Nelson's bighorn sheep. At any time bighorn sheep are seen within 2000 feet of any active construction site, the Designated Biologist or Biological Monitor shall monitor their activity until the animals leave the area. If the bighorn sheep approach within 500 feet of any active construction site, then construction shall cease until the animals have moved farther than 500 feet away from construction activities, even if construction is occurring within an area that had been fenced with tortoise exclusion fencing. This buffer may be modified with the approval of the CPM, BLM, and CDFG. In addition, the project owner shall provide resource agency staff and private conservation foundation staff and volunteers permanent access to the Cady Mountains via Hector Road or another suitable route for any activities related to Nelson's bighorn sheep monitoring or management.

Verification: Impact minimization measures and implementation methods for Nelson's bighorn sheep and their implementation methods shall be included in the final BRMIMP and implemented during construction and operation of the project. Implementation of the measures shall be reported in the Monthly Compliance Reports by the Designated Biologist.

AMERICAN BADGER AND DESERT KIT FOX IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-24 Prior to ground disturbance the project owner shall conduct pre-construction surveys for American badgers and desert kit fox. These surveys may be conducted concurrent with the desert tortoise surveys. Surveys shall be conducted as described below:

Biological Monitors shall perform pre-construction surveys for badger and kit fox dens in the project area, including areas within 90 feet of all project facilities, utility corridors, and access roads. If dens are detected, each den shall be classified as inactive, potentially active, or definitely active.

Inactive dens that would be directly impacted by construction activities shall be excavated by hand and backfilled to prevent reuse by badgers or kit fox. Potentially 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.

Occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den. Maternity dens shall be avoided during the pup-rearing season (15 February through 1 July) and a minimum 200-foot disturbance-free buffer established. Buffers may be modified with the concurrence of CDFG and CPM. Maternity dens shall be flagged for avoidance, identified on construction maps, and a biological monitor shall be present during construction.

If avoidance of a non-maternity den is not feasible, badgers shall be relocated or allowed to escape the project area (e.g., by providing a temporary monitored opening in the tortoise exclusion fence and directing the animal toward the opening with temporary plastic construction fencing). If necessary, dens will be slowly excavated (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more that 4 inches at a time) before or after the rearing season (15 February through 1 July). Any relocation of badgers shall occur only after consultation with the CDFG and CPM. A written report documenting the badger removal shall be provided to the CPM within 30 days of relocation. In the event that passive relocation techniques fail for badgers, the Applicant will contact CDFG to explore other relocation options, which may include trapping.

Verification: The project owner shall submit a report to the CPM, BLM, and CDFG within 30 days of completion of badger and kit fox surveys. The report shall describe survey methods, results, mitigation measures implemented, and the results of the mitigation.

BAT IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-25 The project owner shall conduct a survey for roosting bats prior to any ground disturbance activities in all areas within 200 feet of rocky outcrops or the existing BNSF railroad trestles. The project owner shall also conduct surveys for roosting bats during the maternity season (1 March to 31 July) within 300 feet of project activities at the existing railroad trestles and rocky outcrops. These areas shall be surveyed by a qualified bat biologist, who shall be approved by the Designated Biologist. Surveys shall include a minimum of one day and one evening visit. If active maternity roosts or hibernacula are found, the rock outcrop or trestle occupied by the roost shall be avoided (i.e., not removed) by the project, if feasible. If avoidance of the maternity roost is not

feasible, the bat biologist shall survey (through the use of radio telemetry or other CDFG/CPM/BLM-approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of the CDFG, BLM Wildlife Biologist, and CPM that there are alternative roost sites used by the maternity colony and young are not present, then no further action is required. However, if there are no alternative roost sites used by the maternity colony, provision of substitute roosting bat habitat is required. If active maternity roosts are absent, but a hibernaculum (i.e., a non-maternity roost) is present, then exclusion of bats prior to demolition of roosts is required.

1. Provision of substitute roosting bat habitat. If a maternity roost will be impacted by the project, and no alternative maternity roosts are in use within 1 mile of the site, substitute roosting habitat for the maternity colony shall be provided on, or in close proximity to, the project site no less than three months prior to the eviction of the colony. Alternative roost sites will be constructed in accordance with the specific bats' requirements in coordination with CDFG, BLM Wildlife Biologist, and the CPM. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. The CDFG shall also be notified of any hibernacula or active nurseries within the construction zone.

2. Exclude bats prior to demolition of roosts. If non-breeding bat hibernacula are found in rocky outcrops scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, according to timing and under the direction of the qualified bat biologist, by opening the roosting area to allow airflow through the cavity or other means determined appropriate by the bat biologist (e.g., installation of one-way doors). In situations requiring one-way doors, a minimum of one week shall pass after doors are installed and temperatures should be sufficiently warm for bats to exit the roost. This action should allow all bats to leave during the course of one week. Roosts that need to be removed in situations where the use of one-way doors is not necessary in the judgment of the qualified bat biologist shall first be disturbed by various means at the direction of the bat biologist at dusk to allow bats to escape during the darker hours, and the roost tree shall be removed or the grading shall occur the next day (i.e., there shall be no less or more than one night between initial disturbance and the grading or tree removal).

   If an active maternity roost is located in an area to be impacted by the project, and alternative roosting habitat is available, the demolition of the roost site must commence before maternity colonies form (i.e., prior to 1 March) or after young are flying (i.e., after 31 July) using the exclusion techniques described above.

Verification: The project owner shall submit a report to the CPM, the BLM Wildlife Biologist, and the CDFG within 30 days of completion of roosting bat surveys and any subsequent mitigation. The report shall describe survey methods, results, mitigation measures implemented, and the results of the mitigation.

STREAMBED IMPACT MINIMIZATION AND COMPENSATION MEASURES

BIO-26 The project owner shall implement the following measures to avoid, minimize and mitigate for direct and indirect impacts to jurisdictional waters of the State and to satisfy requirements of California Fish and Game Code sections 1600 and 1607. Throughout this condition, "jurisdictional" refers to streambeds or acreages of streambed meeting CDFG criteria as waters of the State.

Section A: Acquire Off-Site State Waters:

The project owner shall acquire, in fee or in easement, a parcel or parcels of land that includes no fewer than 288.8 acres of State jurisdictional waters. At least 9.9 acres must contain microphyll woodland. Prior to construction the applicant shall map the vegetation with emphasis on desert wash, including mircrophyll woodland, communities within the drainages subject to project disturbance and provide a map to the CPM, CDFG and BLM. Impacts to 3.3 acres of catclaw acacia or smoke tree habitat lost will be mitigated at a minimum 3:1 ratio. The parcel or parcels comprising the 288.8 acres of ephemeral washes shall include the same types of vegetation as mapped in the project footprint.

This compensation acreage may be included ("nested") within the acreage acquired and managed as desert tortoise habitat compensation (Condition of Certification **BIO-17)** only if:

- Adequate acreage of qualifying state-jurisdictional streambed delineated within the desert tortoise compensation lands;
- The desert tortoise habitat compensation lands are acquired and dedicated as permanent conservation lands within 18 months of the start of project construction.

If these two criteria are not met, then the project owner shall provide no fewer than 288.8 acres of state-jurisdictional streambed compensation lands independent of any compensation land required under other conditions of certification (adjusted to reflect the final project footprint and expert's delineation of streambed on the compensation lands), and shall also provide funding for the initial improvement and long-term maintenance and management of the acquired lands, and to comply with other related requirements this condition. Costs of these requirements cannot be estimated in advance because jurisdictional streambed would make up only a small

portion of any acquired parcel and might vary widely among available parcels. In general, however, ~~staff anticipates that~~<the> total costs ~~would~~<are estimated to> include per-acre cost of the land itself at approximately $~~1,000,~~<500,> pre-acquisition liability surveys, appraisal fees, and other transaction costs, ~~,~~appraisal fees at $3,000 per parcel, $250 per acre for initial habitat improvement, BLM internal costs for transfer of land, and $~~1,450~~<692> per acre for long-term management, and (if applicable) NFWF management fees. ~~See **Biological Resources Tables 5** and **7.**~~< (For cost estimates, see BIO-17.) > The terms and conditions of this acquisition or easement shall be as described in Condition of Certification **BIO-17.** Mitigation for impacts to State waters shall occur within the surrounding watersheds, as close to the project site as possible.

The project owner may elect to comply with the requirements in this condition for acquisition of compensation lands, initial protection and habitat improvement on the compensation lands, or long-term maintenance and management of the compensation lands by funding, or any combination of these three requirements, by providing funds to implement those measures into the Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF). To use this option, the Project owner must make an initial deposit to the REAT Account in an amount equal to the estimated costs of implementing the requirement. If the actual cost of the acquisition, initial protection and habitat improvements, or long-term funding is more than the estimated amount initially paid by the project owner, the project owner shall make an additional deposit into the REAT Account sufficient to cover the actual acquisition costs, the actual costs of initial protection and habitat improvement on the compensation lands, or the long-term funding requirements as established in an approved PAR or PAR-like analysis. If those actual costs or PAR projections are less than the amount initially transferred by the applicant, the remaining balance shall be returned to the project owner.

The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFG, BLM and USFWS, prior to land acquisition, enhancement or management activities. Agreements to delegate land acquisition to an approved third party, or to manage compensation lands, shall be executed and implemented within 18 months of the Energy Commission's certification of the project.

Management Plan for Acquired Lands: The project owner shall prepare and submit to Energy Commission CPM and CDFG a draft Management Plan that reflects site-specific enhancement measures for the drainages on the acquired compensation lands. The objective of the Management Plan shall be to

enhance the wildlife value of the drainages, and may include enhancement actions such as weed control, fencing to exclude livestock, or erosion control. Where applicable, the management plan should be integrated with desert tortoise compensation land habitat management planning requirements as described in **BIO-17.**

Section B: On-site Measures:

1. Copies of Requirements, Stop Work Authority: The project owner shall provide a copy of the Streambed Impact Minimization and Compensation Measures to all contractors, subcontractors, and the applicant's project supervisors. Copies shall be readily available at work sites at all times during periods of active work and must be presented to any CDFG personnel or personnel from another agency upon demand. The CPM reserves the right to issue a stop work order after giving notice to the project owner, if the CPM, in consultation with CDFG, determines that the project owner is not in compliance with any of the requirements of this condition, including but not limited to the existence of any of the following:

    a. The information provided by the applicant regarding streambed alteration is incomplete or inaccurate;

    b. New information becomes available that was not known to the Energy Commission at the time of project certification; or

    c. The project or project activities as described in the Supplemental Staff Assessment/Final Environmental Impact Statement have changed.

2. Best Management Practices: The project owner shall comply with the following conditions to protect drainages near the Project Disturbance Area:

    a. The project owner shall not operate vehicles or equipment in ponded or flowing water except as described in this condition.

    b. With the exception of the retention basins and drainage control system installed for the project the installation of bridges, culverts, or other structures shall be such that water flow (velocity and low flow channel width) is not impaired. Bottoms of temporary culverts shall be placed at or below stream channel grade.

    c. When any activity requires moving of equipment across a flowing drainage, such operations shall be conducted without substantially increasing stream turbidity.

d. Vehicles driven across ephemeral drainages when water is present shall be completely clean of petroleum residue and water levels shall be below the vehicles' axels.

e. The project owner shall minimize road building, construction activities and vegetation clearing within ephemeral drainages to the extent feasible.

f. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.

g. The project owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the project owner to ensure compliance.

h. Spoil sites shall not be located at least 30 feet from the boundaries and drainages or in locations that may be subjected to high storm flows, where spoils might be washed back into drainages.

i. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering waters of the State. These materials, placed within or where they may enter a drainage by the project owner or any party working under contract or with the permission of the project owner, shall be removed immediately.

j. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the State.

k. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.

l. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.

m. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to a drainage shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. Clean up equipment such as booms, absorbent pads, and skimmers, shall be on site prior to the start of construction.

n. The cleanup of all spills shall begin immediately. The CDFG, BLM Wildlife Biologist, and CPM shall be notified immediately by the project owner of any spills and shall be consulted regarding clean-up procedures.

3. Non-Native Vegetation Removal. The owner shall remove any non-native vegetation (Consistent with the Weed Management Plan, see Condition of Certification **BIO-1 1)** from any on-site portion of any drainage that requires the placement of a bridge, culvert or other structure. Removal shall be done at least twice annually (Spring/Summer) throughout the life of the Project.

4. Reporting of Special-Status Species: If any special-status species are observed on or in proximity to the project site, or during project surveys, the project owner shall submit California Natural Diversity Data Base (CNDDB) forms and maps to the CNDDB within five working days of the sightings and provide the regional CDFG office with copies of the CNDDB forms and survey maps. The CNDDB form is available online at http://www. dfg.ca.gov/whdab/pdfs/natspec.pdf. This information shall be mailed within five days to: California Department of Fish and Game, Natural Diversity Data Base, 1807 13th Street, Suite 202, Sacramento, CA 95814, (916) 324-3812. A copy of this information shall also be mailed within five days to CDFG, BLM Wildlife Biologist, and the CPM.

5. Notification: Prior to any activities that cross or have the potential to impact any jurisdictional drainage, the project owner shall provide a detailed map to the CDFG, BLM Wildlife Biologist, and CPM in a GIS format that identifies all potential crossings of jurisdictional habitats including retention basins, detention basins, reconfigured channels and culverts. The maps shall identify the type of crossing proposed by the owner such as bridges, culverts, or other mechanism and the best management practices that would be employed. The project owner shall notify the CPM, BLM Wildlife Biologist, and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional areas and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM, BLM Wildlife Biologist, and CDFG of any change of conditions to the project, the jurisdictional impacts, or the mitigation efforts, if the conditions at the site of the proposed project change in a manner which changes risk to biological resources that may be substantially adversely affected by the proposed

project. The notifying report shall be provided to the CPM, BLM Wildlife Biologist, and CDFG no later than 7 days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the laws or regulations pertinent to the project, as described below. A copy of the notifying change of conditions report shall be included in the annual reports.

a. Biological Conditions: a change in biological conditions includes, but is not limited to, the following: 1) the presence of biological resources within or adjacent to the project area, whether native or non-native, not previously known to occur in the area; or 2) the presence of biological resources within or adjacent to the project area, whether native or non-native, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

b. Physical Conditions: a change in physical conditions includes, but is not limited to, the following: 1) a change in the morphology of a river, stream, or lake, such as the lowering of a bed or scouring of a bank, or changes in stream form and configuration caused by storm events; 2) the movement of a river or stream channel to a different location; 3) a reduction of or other change in vegetation on the bed, channel, or bank of a drainage, or 4) changes to the hydrologic regime such as fluctuations in the timing or volume of water flows in a river or stream.

c. Legal Conditions: a change in legal conditions includes, but is not limited to, a change in Regulations, Statutory Law, a Judicial or Court decision, or the listing of a species, the status of which has changed to endangered, rare, or threatened, as defined in section 15380 of Title 14 of the California Code of Regulations.

Verification: No fewer than 30 days prior to the start of any site or related facilities mobilization activities, the project owner shall implement the mitigation measures described in this condition. No fewer than 30 days prior to the start of work potentially affecting waters of the State, the project owner shall provide written verification (i.e., through incorporation into the BRMIMP) to the CPM and BLM Wildlife Biologist that the above best management practices will be implemented and provide a discussion of work in waters of the State in Compliance Reports for the duration of the project.

Within 30 days after completion of the first year of project construction, the project owner shall provide to the CPM for review and approval a report identifying that appropriate mitigation lands have been obtained, verification of the acreage of state jurisdictional streambeds on the compensation lands (to be delineated using methodology identical to the delineation of on-site jurisdictional streambeds), a draft Management Plan for review and approval by the CPM and CDFG, and verification on

ongoing enhancement techniques, and a summary of all modifications made to the existing channels on the project site.

EVAPORATION POND DESIGN, MONITORING, AND MANAGEMENT PLAN

BIO-27 The project owner shall install netting over the evaporation ponds and design and implement an Evaporation Pond Design, Monitoring, and Management Plan (Evaporation Pond Plan) to be based upon the draft Evaporation Pond Plan submitted by the applicant. The Plan shall meet the approval of the USFWS, CDFG, BLM's Wildlife Biologist, and the CPM. The goal of the Evaporation Pond Plan shall be to avoid the potential for wildlife mortality associated with the evaporation ponds. The Evaporation Pond Plan shall include: a discussion of the objectives of the Evaporation Pond Plan; a description of project design features such as side slope specifications, freeboard and depth requirements, covering, and fencing; a discussion on the placement of the evaporation pond as to reduce the potential of collision or electrocution of wildlife near the transmission line; avian, pond, and water quality monitoring for selenium and other Title 20 compounds, management actions such as bird deterrence/hazing and water level management, triggers for those management actions; and annual reporting requirements.

Verification: At least 30 days prior to start of any project-related ground disturbance activities, the project owner shall provide the CPM, BLM's Wildlife Biologist, USFWS, and CDFG with the final version of the Evaporation Pond Plan that has been reviewed and approved by USFWS, CDFG, and staff. The CPM and BLM's Wildlife Biologist would determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Evaporation Pond Plan must be made only after consultation the staff, USFWS, and CDFG. The project owner shall notify the CPM and BLM's Wildlife Biologist no less than 5 working days before implementing any BLM- and CPM-approved modifications to the Evaporation Pond Plan.

Within 30 days after completion of evaporation pond construction, the project owner shall provide to the CPM for review and approval a report identifying which items of the Evaporation Pond Plan have been completed, a summary of all modifications to mitigation measures made during the project's construction phase, and as-built drawings of the evaporation ponds. Throughout the life of the project, the project owner shall provide annual reports on results of the previous year's evaporation plan monitoring, including but not limited to description and summary of wildlife mortality, water quality, and management actions taken or proposed.

CHANNEL DECOMMISSIONING AND RECLAMATION PLAN

BIO-28 Upon project closure, the project owner shall implement a final Decommissioning and Reclamation Plan to remove the engineered diversion channels, detention basins, and other sediment control features from the

project site. The goal of the plan shall be to restore the site's topography and hydrology to a relatively natural condition and to establish native plant communities within the Project Disturbance Area. The Channel Decommissioning and Reclamation Plan shall include a cost estimate for implementing the proposed decommissioning and reclamation activities. The plan and cost estimate shall be consistent with the guidelines in BLM's 43 CFR 3809.550 et seq., subject to review and revisions from BLM's Wildlife Biologist and the CPM in consultation with USFWS and CDFG.

Verification: No less than 90 days from publication of the Energy Commission Decision or the Record of Decision, whichever comes first, the project owner shall provide to BLM's Wildlife Biologist and the CPM an agency-approved final Channel Decommissioning and Reclamation Plan. Modifications to the approved Channel Decommissioning Plan shall be made only after approval from BLM's Wildlife Biologist and the CPM, in consultation with USFWS, and CDFG.

No more than 10 days prior to initiating project-related ground disturbance activities the project owner shall provide financial assurances to BLM's Wildlife Biologist and the CPM to guarantee that an adequate level of funding would be available to implement measures described in the Channel Decommissioning and Reclamation Plan, pursuant to 43 CFR 3809.550 et seq.

CLOSURE PLAN MEASURES

BIO-29 The project owner shall implement and incorporate into the facility closure plan measures to address the local biological resources related to facility closure. A funding mechanism shall be developed in consultation with staff to ensure sufficient funds are available for revegetation, reclamation, and decommissioning. The facility closure plan shall address biological resources-related mitigation measures. In addition to these measures, the plan must include the following:

1. Removal of transmission conductors when they are no longer used and useful;

2. Removal of all above-ground and subsurface power plant site facilities and related facilities;

3. Methods for restoring wildlife habitat and promoting the re-establishment of native plant and wildlife species;

4. Revegetation of the project site and other disturbed areas utilizing appropriate methods for establishing native vegetation; components of the revegetation plan, including performance standards and monitoring, shall be as described in Condition of Certification **BIO-10**;

5. A cost estimate to complete closure-related activities, to be based upon decommissioning costs required under 43 CFR 3809.550 et seq.

6. An implementation and monitoring plan to ensure successful and satisfactory completion of every element of the Facility Closure Plan.

In addition, the project owner shall secure funding to ensure implementation of the plan and provide to the CPM and BLM Wildlife Biologist written evidence of the dedicated funding mechanism(s). The financial assurances may be in the form of an irrevocable letter of credit, a performance bond, a pledged savings account, or another equivalent form of security, as approved by the CPM and BLM Wildlife Biologist.

Verification: Prior to initiating ground-disturbing project activities, the project owner shall provide financial assurances (as described in this condition, above) to the CPM and BLM Wildlife Biologist to guarantee that an adequate level of funding will be available to implement decommissioning and closure activities described above.

At least 12 months prior to commencement of planned closure activities, the project owner shall address all biological resources-related issues associated with facility closure, and provide final measures, in a Biological Resources Element. The draft planned permanent or unplanned closure measures shall be submitted to the CPM, BLM Wildlife Biologist, CDFG, and USFWS. After revision, final measures shall comprise the Biological Resources Element, which shall include the items listed above as well as written evidence of the dedicated funding mechanism(s) for these measures. The final Biological Resources Element shall become part of the facility closure plan, which is submitted to the CPM and BLM Wildlife Biologist within 90 days of the permanent closure or another period of time agreed to by the CPM and BLM Wildlife Biologist.

In the event of an unplanned permanent closure, or an indeterminate suspension of operations, the project owner shall notify the CPM and BLM Wildlife Biologist , as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan (see **Compliance** Conditions of Certification).

Upon facility closure, the project owner shall implement measures in the Biological Resources Element and provide written status updates on all closure activities to the CPM and BLM Wildlife Biologist at a frequency determined by the CPM and BLM Wildlife Biologist.

IN-LIEU FEE MITIGATION OPTION

BIO-30 The Project owner may choose to satisfy certain compensatory mitigation obligations identified in this Decision by paying an in lieu fee to the Department of Fish and Game pursuant to Fish and Game code sections 2069

and 2099, to the extent the in-lieu fee provision is found by the Commission to be in compliance with CEQA and CESA requirements.

Verification: If electing to use this provision, the Project owner shall notify the Commission that it would like a determination that the in-lieu fee proposal meets CEQA and CESA requirements.

CUL-1 Prior to the start of ground disturbance (includes “preconstruction site mobilization,” “ground disturbance,” and “construction grading, boring, and trenching,” as defined in the General Conditions for this project), the project owner shall obtain the services of a Cultural Resources Specialist (CRS) and one or more alternate CRSs (at the project owner’s option).

The CRS shall manage all cultural resources monitoring, mitigation, curation, and reporting activities in accordance with the Conditions of Certification (Conditions). The CRS may elect to obtain the services of Cultural Resources Monitors (CRMs) and other technical specialists, if needed, to assist in monitoring, mitigation, and curation activities. The project owner shall ensure that the CRS makes recommendations regarding the eligibility for listing in the California Register of Historical Resources (CRHR) of any cultural resources that are newly discovered or that may be affected in an unanticipated manner. No ground disturbance shall occur prior to Compliance Project Manager (CPM) approval of the CRS and alternates, unless such activities are specifically approved by the CPM.

Approval of a CRS may be denied or revoked for reasons including but not limited to non-compliance on this or other Energy Commission projects. After all ground disturbance is completed and the CRS has fulfilled all responsibilities specified in these cultural resources conditions, the project owner may discharge the CRS, if the CPM approves. With the discharge of the CRS, these cultural resources conditions no longer apply to the activities of this power plant.

CULTURAL RESOURCES SPECIALIST

The resumes for the CRS and alternate(s) shall include information demonstrating to the satisfaction of the CPM that their training and backgrounds conform to the U.S. Secretary of Interior’s Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61). In addition, the CRS shall have the following qualifications:

1. The CRS’s qualifications shall be appropriate to the needs of the project and shall include a background in anthropology, archaeology, history, architectural history, or a related field;

2. At least three years of archaeological or historical, as appropriate (per nature of predominant cultural resources on the project site), resource mitigation and field experience in California; and

3. At least one year of experience in a decision-making capacity on cultural resources projects in California and the appropriate training and

experience to knowledgably make recommendations regarding the significance of cultural resources.

The resumes of the CRS and alternate CRS shall include the names and telephone numbers of contacts familiar with the work of the CRS/alternate CRS on referenced projects and demonstrate to the satisfaction of the CPM that the CRS/alternate CRS has the appropriate training and experience to implement effectively the Conditions.

CULTURAL RESOURCES MONITORS

CRMs shall have the following qualifications:

1. a B.S. or B.A. degree in anthropology, archaeology, historical archaeology, or a related field, and one year experience monitoring in California; or

2. an A.S. or A.A. degree in anthropology, archaeology, historical archaeology, or a related field, and four years experience monitoring in California; or

3. enrollment in upper division classes pursuing a degree in the fields of anthropology, archaeology, historical archaeology, or a related field, and two years of monitoring experience in California.

CULTURAL RESOURCES TECHNICAL SPECIALISTS

The resume(s) of any additional technical specialist(s), e.g., historical archaeologist, historian, architectural historian, and/or physical anthropologist, shall be submitted to the CPM for approval.

Verification:

1. At least ~~45~~<15> days prior to the start of ground disturbance, the project owner shall submit the resume for the CRS, and alternate(s) if desired, to the CPM for review and approval.

2. At least 10 days prior to a termination or release of the CRS, or within 10 days after the resignation of a CRS, the project owner shall submit the resume of the proposed new CRS to the CPM for review and approval. At the same time, the project owner shall also provide to the proposed new CRS the AFC and all cultural resources documents, field notes, photographs, and other cultural resources materials generated by the project. If no alternate CRS is available to assume the duties of the CRS, a monitor may serve in place of a CRS so that ground disturbance may continue up to a maximum of 3 days without a CRS. If cultural resources are discovered then ground disturbance will remain halted until there is a CRS or alternate CRS to make a recommendation regarding significance.

3. At least 20 days prior to ground disturbance, the CRS shall provide a letter naming anticipated CRMs for the project and stating that the identified CRMs meet the minimum qualifications for cultural resources monitoring required by this Condition.

4. At least 5 days prior to additional CRMs beginning on-site duties during the project, the CRS shall provide letters to the CPM identifying the new CRMs and attesting to their qualifications.

5. At least 10 days prior to any technical specialists, other than CRMS, beginning tasks, the resume(s) of the specialists shall be provided to the CPM for review and approval.

6. At least 10 days prior to the start of ground disturbance, the project owner shall confirm in writing to the CPM that the approved CRS will be available for onsite work and is prepared to implement the cultural resources conditions.

CUL-2 Prior to the start of ground disturbance, if the CRS has not previously worked on the project, the project owner shall provide the CRS with copies of the AFC, data responses, confidential cultural resources reports< (upon BLM approval)>, and the ~~Final~~<Energy Commission's Supplemental> Staff Assessment ~~(FSA~~<Part II (SSA Part II) and the BLM's Final Environmental Impact Statement (FEIS>) for the project. The project owner shall also provide the CRS and the CPM with maps and drawings showing the footprints of the power plant, all linear facility routes, all access roads, and all laydown areas. Maps shall include the appropriate USGS quadrangles and a map at an appropriate scale (e.g., 1:2400 or 1" = 200') for plotting cultural features or materials. If the CRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the CRS and CPM. The CPM shall review map submittals and, in consultation with the CRS, approve those that are appropriate for use in cultural resources planning activities. No ground disturbance shall occur prior to CPM approval of maps and drawings, unless such activities are specifically approved by the CPM.

If construction of the project would proceed in phases, maps and drawings not previously provided shall be provided to the CRS and CPM prior to the start of each phase. Written notice identifying the proposed schedule of each project phase shall be provided to the CRS and CPM.

Weekly, until ground disturbance is completed, the project construction manager shall provide to the CRS and CPM a schedule of project activities for the following week, including the identification of area(s) where ground disturbance will occur during that week.

The project owner shall notify the CRS and CPM of any changes to the scheduling of the construction phases.

Verification:

1. At least ~~40~~<15> days prior to the start of ground disturbance, the project owner shall provide the AFC, data responses, confidential cultural resources documents, <the SSA Part II, >and the ~~FSA~~<FEIS> to the CRS, if needed, and the subject maps and drawings to the CRS and CPM. The CPM will review submittals in consultation with the CRS and approve maps and drawings suitable for cultural resources planning activities.

2. At least 15 days prior to the start of ground disturbance, if there are changes to any project-related footprint, the project owner shall provide revised maps and drawings for the changes to the CRS and CPM.

3. At least 15 days prior to the start of each phase of a phased project, the project owner shall submit the appropriate maps and drawings, if not previously provided, to the CRS and CPM.

4. Weekly, during ground disturbance, a current schedule of anticipated project activity shall be provided to the CRS and CPM by letter, e-mail, or fax.

5. Within 5 days of changing the scheduling of phases of a phased project, the project owner shall provide written notice of the changes to the CRS and CPM.

CUL-3 Changes to the proposed project or to the character of its construction, operation, and maintenance that may become necessary subsequent to the approval of the project, were such approval to occur, may in turn require the re-consideration of the extent of the original project area. Where such changes indicate the need to alter the original project area to include additional lands that were not elements of analysis during the certification process, the effects of any proposed changes on historical resources that may be on such lands would need to be taken into account. Changes in the character of the construction, operation, and maintenance of the proposed project may include such actions as decisions to use non-commercial borrow or disposal sites.

Upon the recognition that proposed changes to the project would require the use of lands that were not a part of the original project area of analysis, the project owner shall ensure that the CRS surveys any such lands for cultural resources and record each newly found resource on DPR 523 Series forms. Exceptions would be made to this protocol in cases where cultural resources surveys no greater than five years in age are documented for the entirety of the subject lands and approved by the CPM. Where new cultural resources surveys are warranted, the project owner shall convey the results of such surveys, along with the CRS's recommendations for further action, to the CPM, who will determine whether further action is necessary. If the CPM determines that historical resources may be present and that any such resource may be subject to a substantial adverse change in its significance, the project owner shall ensure that the CRS provides the CPM with substantiated recommendations on whether each such resource is eligible for listing in the CRHR and recommendations for the resolution of any such

significant effects. The CRS, the project owner, and the CPM shall then confer on said recommendations, and, upon the concurrence of the CPM with those recommendations, the project owner shall ensure that the CRS proceeds to implement them, and reports on the methods and the results of any such work in the final Cultural Resources Report (CRR) (**CUL-8**).

Verification:

1. Upon the recognition that proposed changes to the project or to the character of the construction, operation, and maintenance of the project would require the use of lands that were not a part of the original project area, the project owner shall notify the CRS and CPM. The project owner shall then provide, for CPM review and approval, documentation of any cultural resources surveys five years or less in age that exist for the additional lands.

2. At least 105 days prior to the use of the new additional project area lands, in the absence of any such cultural resources surveys or when the extant cultural resources surveys do not cover the entirety of the lands to be added to the project area, the project owner shall ensure that the CRS surveys the additional lands for cultural resources, notifies the project owner and the CPM of the results of the new cultural resources survey, and recommends further action.

3. No more than 15 days subsequent to the receipt of the information in verification 2, **CUL-3**, above, the CPM shall determine whether historical resources may be present and whether any such resources may be subject to substantial adverse changes in significance.

4. At least 60 days prior to the use of the new additional project area lands, if the CPM determines that historical resources may be subject to substantial adverse changes in significance, the project owner shall ensure that the CRS provides the CPM with substantiated evaluations, based on archival and field research, on whether each such resource is eligible for listing in the CRHR and recommendations for the resolution of any potential significant effects.

5. For no longer than 15 days, the project owner, the CRS, and the CPM shall confer about the above evaluations and recommendations, and, upon the concurrence of the CPM with those evaluations and recommendations, the project owner shall ensure that the CRS proceeds to resolve any significant effects pursuant to the above recommendations prior to the use of the new additional project area lands.

6. The project owner shall ensure that the CRS reports on the methods and the results of all such work in the CRR (**CUL-7**).

CUL-4 Prior to the ~~preparation of the Cultural Resources Monitoring and Mitigation Plan (CRMMP), pursuant to **CUL-5**,~~<start of ground disturbance,> the project owner shall develop, prepare, and implement a series of protocols the purposes of which will be to gather and analyze information to refine the

assessments of the historical significance of the archaeological resources in the project area of analysis. The project owner shall ~~first prepare and submit, for the review and approval of the CPM, a final draft of an archaeological resource taxonomy that splits out the individual archaeological resources in the project area of analysis into objectively similar archaeological site types or site type groups, and that delimits, as appropriate, groups of individual resources, such as districts or landscapes, that relate unifying prehistoric and historic themes. The initial basis for the taxonomy of individual archaeological resources should be the taxonomy in the "Cultural Resource Site Taxonomy" subsection of the published SSA for this project. Subsequent to CPM approval of the final draft of the archaeological resource taxonomy, the project owner shall~~ prepare and submit, for the review and approval of the CPM and consistent with the guidance found in the February 1990 "Archaeological Resource Management Reports (ARMR): Recommended Contents and Format" and the February 1991 "Guidelines for Archaeological Research Designs," separate protocols for the CRHR evaluation of each archaeological site type or site type group in the CPM-approved, final archaeological resource taxonomy and for each archaeological district, landscape, or other large-scale archaeological resource in the subject taxonomy.< A field methodology will be included in each protocol which outlines a representative sample of 5% of each of the site types which would be selected for further evaluation. Ground disturbance on or in the vinicity of sites selected for evaluation may not commence until the evaluation reports have been completed. Ground disturbance may begin on portions of the project area which do not contain sites selected for further evaluation, subject to the construction monitoring provisions of **CUL-9**.> Among the large-scale resources that the project owner shall explicitly consider ~~in the final draft of the archaeological resource taxonomy~~ are a prehistoric archaeological landscape that encompasses the numerous and diverse individual prehistoric archaeological sites across the desert pavements in the southern portion of the project area, a potential historical archaeological gravel mining district over roughly the western to west-central portion of the project area, and the archaeological remnants of the segment of the National Trails Road in the project area that may be a contributing element to a National Trails Road historic district.

Each CRHR evaluation protocol shall include, at a minimum, the following elements:

1. A background research section which develops interpretive contexts germane to each protocol and which presents information on previous research in the vicinity of the project area, generally, and on previous research on the specific resource types under consideration in the respective protocols.

2. An evaluation phase research design which, in the case of protocols prepared for individual archaeological resource types or type groups,

should include a rationalized< 5%> sample of the resources in a type or type group, rather than a protocol structured to sample 100 percent of the population of a type or type group, and which explicitly takes into account extant information on the subject resources.

3. A detailed and explicit field methodology tailored to acquire the data necessary to address specific research questions.

4. Provisions for ~~visual~~<specilists to be present on site> and specialized laboratory analyses of recovered cultural materials<, where feasible and if determined necessary to complete CRHR evaluation>.

5. Provisions for ~~visual and specialized~~ laboratory analyses of chronometric samples, and organic remains and residues<, where feasible and if determined necessary to complete CRHR evaluation>.

Where defensible relative to archaeological theory, the project owner may submit documents that, within a single document, tier several separate evaluation protocols from common background research. In such documents, the project owner would develop and present germane prehistoric or historic contexts and present a general review of previous archaeological research in the project area vicinity before laying out the specific evaluation protocols for particular archaeological resources by reviewing previous archaeological research specific to a resource type, type group, or large-scale resource, and then developing and presenting custom research designs for those particular resources.

Subsequent to the completion of the implementation of each protocol, the project owner shall prepare and submit, for the review and approval of the CPM, separate reports on the results of the implementation of each protocol, on the analysis and interpretation of that data, and on the CRHR evaluation of the resource type, type group, or large-scale resource that a subject protocol addresses.

Each CRHR evaluation report ~~shall~~<may> include, ~~at a minimum~~<as appropriate>, the following elements:

1. Synopses of the background research section, evaluation phase research design, field methodology, and material culture, chronometric, and organic analyses as set out in the relevant original evaluation protocol.

2. A detailed, explicit, illustrated presentation of the results of the field and laboratory work done under the relevant protocol.

3. An analysis and behavioral interpretation of data from previous research, and of field and laboratory data acquired as the result of the implementation of the relevant protocol.

4. Formal evaluation of the specific resource types relative to the CRHR program.

The project owner may lump the evaluation reports into report documents that reflect any prior approved protocol documents that contain more than one protocol.

Verification:

1. At least 150 days prior to the start of ground disturbance, the project owner shall ~~submit a final draft of the archaeological resource taxonomy for the project area of analysis to the CPM for review and approval.2. At least 120 days prior to the start of ground disturbance, the project owner shall~~ have submitted all CRHR evaluation protocols to the CPM for review and approval<. CPM review will take no longer than 5 days>.

3. At least ~~60~~<5> days prior to the start of ground disturbance<, which would impact sites selected for further evaluation>, the project owner shall have submitted all CRHR evaluation reports to the CPM for review and approval.

CUL-5 Prior to the start of ground disturbance, the project owner shall submit the CRMMP, as prepared by or under the direction of the CRS, to the CPM for review and approval. The CRMMP shall follow the content and organization of the draft model CRMMP, provided by the CPM, and the authors' name(s) shall appear on the title page of the CRMMP. The CRMMP shall identify general and specific measures to minimize potential impacts to sensitive cultural resources. Implementation of the CRMMP shall be the responsibility of the CRS and the project owner. Copies of the CRMMP shall reside with the CRS, alternate CRS, each CRM, and the project owner's on-site construction manager. No ground disturbance shall occur prior to CPM approval of the CRMMP, unless such activities are specifically approved by the CPM.

The CRMMP shall include, but not be limited to, the following elements and measures:

1. The following statement included in the Introduction: "Any discussion, summary, or paraphrasing of the Conditions of Certification in this CRMMP is intended as general guidance and as an aid to the user in understanding the Conditions and their implementation. The conditions, as written in the Commission Decision, shall supersede any summarization, description, or interpretation of the conditions in the CRMMP. The Cultural Resources Conditions of Certification from the Commission Decision are contained in Appendix A."

2. A proposed general research design that includes a discussion of archaeological research questions and testable hypotheses specifically applicable to the project area, and a discussion of artifact collection,

retention/disposal, and curation policies as related to the research questions formulated in the research design. The research design will specify that the preferred treatment strategy for any buried archaeological deposits is avoidance. Specific mitigation plans shall be prepared and submitted, for the review and approval of the CPM, for any unavoidable significant effects to archaeological resource types, type groups, or large-scale archaeological resources determined by the process in **CUL-4** to be eligible for listing in the CRHR. Specific mitigation plans shall also be prepared and submitted, pursuant to **CUL-6**, for the review and approval of the CPM, for the ~~unmitigable~~<unavoidable> significant effects that the project will have on U.S. Route 66, and for any other significant effects that the project may have on other significant built-environment resources. Prescriptive treatment plans for construction-related discoveries may also be included in the CRMMP for limited archaeological resource types.

3. <indicate how recovered materials and records will be disposed, taking into account the expressed wishes of the consulting Native Americans.>

<4. include a schedule for providing the consulting Native Americans with periodic updates on implementation of the Treatment Plan.>

<5. include a schedule for completing a final data recovery and discovery report and specify when and to whom this report will be distributed.>

<6. include a curation agreement that ensures that all materials (other than Native American human remains and grave-associated materials) and records are maintained in accordance with 36 CFR Part 79. Materials recovered from privately owned lands, other than Native American human remains and grave-associated materials, that are to be returned to their owners, will be maintained in accordance with 36 CFR Part 79 until their analysis is completed.>

<7. specify the manner in which human remains and grave-associated artifacts recovered during data recovery or discovered during subsequent construction will be treated according to the applicable laws and regulations, and in consultation with the wishes of the consulting Native Americans.>

<8. >Specification of the implementation sequence and the estimated time frames needed to accomplish all project-related tasks during the ground-disturbance and post-ground–disturbance analysis phases of the project.

~~4.~~<9.> Identification of the person(s) expected to perform each of the tasks, their responsibilities, and the reporting relationships between project construction management and the mitigation and monitoring team.

~~5.~~<10.> A description of the manner in which Native American observers or monitors will be included, the procedures to be used to select them, and their role and responsibilities.

~~6.~~<11.> A description of all impact-avoidance measures (such as flagging or fencing) to prohibit or otherwise restrict access to sensitive resource areas that are to be avoided during ground disturbance, construction, and/or operation, and identification of areas where these measures are to be implemented. The description shall address how these measures would be implemented prior to the start of ground disturbance and how long they would be needed to protect the resources from project-related effects.

~~7.~~<12.> A statement that all encountered cultural resources over 50 years old shall be recorded on Department of Parks and Recreation (DPR) 523 forms and mapped and photographed. In addition, all archaeological materials retained as a result of the archaeological investigations (survey, testing, data recovery) shall be curated in accordance with the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, into a retrievable storage collection in a public repository or museum.

~~8.~~<13.> A statement that the project owner will pay all curation fees for artifacts recovered and for related documentation produced during cultural resources investigations conducted for the project. The project owner shall identify three possible curation facilities that could accept cultural resources materials resulting from project activities.

~~9.~~<14.> A statement that the CRS has access to equipment and supplies necessary for site mapping, photography, and recovery of any cultural resource materials that are encountered during ground disturbance and cannot be treated prescriptively.

~~10.~~<15.> A description of the contents, format, and review and approval process of the final Cultural Resource Report (CRR), which shall be prepared according to ARMR guidelines.

Verification:

1. Upon approval of the CRS proposed by the project owner, the CPM will provide to the project owner an electronic copy of the draft model CRMMP for the CRS.

2. At least 30 days prior to the start of ground disturbance, the project owner shall submit the CRMMP to the CPM for review and approval.

3. At least 30 days prior to the start of ground disturbance, in a letter to the CPM, the project owner shall agree to pay curation fees for any materials generated or

collected as a result of the archaeological investigations (survey, testing, data recovery).

4. Within 90 days after completion of ground disturbance (including landscaping), if cultural materials requiring curation were generated or collected, the project owner shall provide to the CPM a copy of an agreement with, or other written commitment from, a curation facility that meets the standards stated in the California State Historical Resources Commission's *Guidelines for the Curation of Archaeological Collections*, to accept the cultural materials from this project. Any agreements concerning curation will be retained and available for audit for the life of the project.

CUL-6 Prior to the start of ground disturbance the project owner shall complete Historic American Landscape Survey (HALS) <large-format photographs (with negatives), sketch plan(s), and written >documentation of the 9-mile long segment of U.S. Route ~~66 and associated landscapes and viewsheds~~<66, including its landscape, viewshed, and character-defining features> within the project area from the roadway. ~~The project owner shall ensure that photodocumentation is~~<In total, no more than fifteen photographic views will be prepared, and all photographs will be keyed to a locational map. The sketch plan(s) shall include any structures (e.g., bridges or culverts) associated with the road within the 9-mile segment of the roadway and located within a half-mile from the project area.>

<The project owner shall ensure that the large-format photographs (with negatives), written documentation, and the sketch plan(s) will meet the standards and guidelines of a HALS Level III study. The documentation efforts will meet the minimum requirements for a HALS study, but will not be submitted to the HALS office of the National Parks Service and the Library of Congress. Instead, the project owner shall ensure that one copy of the archivally stable original photographs and negatives, sketch plan(s), and written documentation are> submitted to the California Historical Resources Information System ~~(CHRIS) and to the Historic American Landscape Survey (HALS) Program~~<for archival storage, and one acid-free reproduction of the photographic prints, sketch plan(s), and written documentation is made available to the following respositories and agencies: County of San Bernardino, California Energy Commission, and the Bureau of Land Management>. The project owner shall be responsible for any associated curation fees.

Documentation shall ~~adhere to the established HALS recordation guidelines and~~ be undertaken and completed by a ~~historian~~<person> meeting the U.S. Secretary of Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61) and a qualified architectural photographer. The resumes of the ~~historian~~<qualified personnel> and architectural photographer shall include the names and telephone numbers of contacts familiar with their work on referenced projects and demonstrate to the satisfaction of the CPM that the ~~historian~~<qualified

personnel> and architectural photographer have the appropriate training and experience to effectively implement this condition. The applicant may undertake the HALS< photographic and written> recordation activities prior to certification. The applicant undertaking such activities would do so, at their own risk, as a means of advantaging their schedule.

The project owner shall submit the final HALS <photographic, sketch plan(s), and written >documentation to the CPM for review and approval. The final HALS report and documentation shall be provided in the format specified by the HALS< Level III standards and> guidelines. The applicant may undertake the HALS recordation activities prior to certification. The applicant undertaking such activities would do so, at their own risk, as a means of advantaging their schedule.The HALS documentation shall be used to develop an interpretive display adjacent to the project in an area easily accessible by the public. The interpretative display shall display photographs of the project site and include a written history of Route 66 and its significance in the eastern Mojave, to be reviewed and approved by the CPM prior to installation. The project owner shall maintain the interpretive display for the life of the project.

Verification:

1. At least 60<20> days prior to the start of ground disturbance, the project owner shall submit the resume for the historian<qualified personnel> and architectural photographer to the CPM<CEC Architectural Historian> for review and approval<. CEC review will take no longer than 5 days>.

2. At least 45<10> days prior to the start of ground disturbance, the project owner shall submit the research design for the<draft> HALS report and documentation to the CPM<CEC Architectural Historian> for review and approval<. Review and comment will be provided back to the project owner within 5 business days>.

3. At least 15 days prior to the start of ground disturbance, the project owner shall submit the draft HALS report to the CPM for review and approval. If any reports have previously been sent to the CHRIS and/or the HALS, then receipt letters from the CHRIS and/or HALS or other verification of receipt shall be included in an appendix.4. Within 10<15> days after CPM<the CEC Architectural Historian> approval of the HALS report, the project owner shall provide documentation to the CPM confirming that copies of the final report have been provided to the SHPO, the CHRIS, and the HALS.

5. At least 60 days prior to the completion of Phase 1 construction, the project owner shall submit the interpretive display design and text to the CPM for review and approval.

CUL-7 The project owner shall submit the final Cultural Resources Report (CRR) to the CPM for approval. The final CRR shall be written by or under the direction of the CRS and shall be provided in the ARMR format. The final CRR shall

report on all field activities including dates, times and locations, results, samplings, and analyses. All survey reports, Department of Parks and Recreation (DPR) 523 Series forms, data recovery reports, and any additional research reports not previously submitted to the California Historical Resource Information System (CHRIS) and the State Historic Preservation Officer (SHPO) shall be included as appendices to the final CRR.

If the project owner requests a suspension of ground disturbance and/or construction activities, then a draft CRR that covers all cultural resources activities associated with the project shall be prepared by the CRS and submitted to the CPM for review and approval on the same day as the suspension/extension request. The draft CRR shall be retained at the project site in a secure facility until ground disturbance and/or construction resumes or the project is withdrawn. If the project is withdrawn, then a final CRR shall be submitted to the CPM for review and approval at the same time as the withdrawal request.

Verification:

1. Within 30 days after requesting a suspension of construction activities, the project owner shall submit a draft CRR to the CPM for review and approval.

2. Within 90 days after completion of ground disturbance (including landscaping), the project owner shall submit the final CRR to the CPM for review and approval. If any reports have previously been sent to the CHRIS, then receipt letters from the CHRIS or other verification of receipt shall be included in an appendix.

3. Within 10 days after CPM approval of the CRR, the project owner shall provide documentation to the CPM confirming that copies of the final CRR have been provided to the SHPO, the CHRIS, the curating institution, if archaeological materials were collected, and to the Tribal Chairpersons of any Native American groups requesting copies of project-related reports.

CUL-8 Prior to and for the duration of ground disturbance, the project owner shall provide Worker Environmental Awareness Program (WEAP) training to all new workers within their first week of employment at the project site, along the linear facilities routes, and at laydown areas, roads, and other ancillary areas. The training shall be prepared by the CRS, may be conducted by any member of the archaeological team, and may be presented in the form of a video. The CRS shall be available (by telephone or in person) to answer questions posed by employees. The training may be discontinued when ground disturbance is completed or suspended, but must be resumed when ground disturbance, such as landscaping, resumes.

The training shall include:

1. A discussion of applicable laws and penalties under the law;

2. Samples or visuals of artifacts that might be found in the project vicinity;

3. A discussion of what such artifacts may look like when partially buried, or wholly buried and then freshly exposed;

4. A discussion of what prehistoric and historical archaeological deposits look like at the surface and when exposed during construction, and the range of variation in the appearance of such deposits;

5. Instruction that the CRS, alternate CRS, and CRMs have the authority to halt ground disturbance in the area of a discovery to an extent sufficient to ensure that the resource is protected from further impacts, as determined by the CRS;

6. Instruction that employees are to halt work on their own in the vicinity of a potential cultural resources discovery and shall contact their supervisor and the CRS or CRM, and that redirection of work would be determined by the construction supervisor and the CRS;

7. An informational brochure that identifies reporting procedures in the event of a discovery;

8. An acknowledgement form signed by each worker indicating that they have received the training; and

9. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

No ground disturbance shall occur prior to implementation of the WEAP program, unless such activities are specifically approved by the CPM.

Verification:

1. At least 30 days prior to the beginning of ground disturbance, the CRS shall provide the training program draft text and graphics and the informational brochure to the CPM for review and approval.

2. At least 15 days prior to the beginning of ground disturbance, the CPM will provide to the project owner a WEAP Training Acknowledgement form for each WEAP-trained worker to sign.

3. Monthly, until ground disturbance is completed, the project owner shall provide in the Monthly Compliance Report (MCR) the WEAP Training Acknowledgement forms of workers who have completed the training in the prior month and a running total of all persons who have completed training to date.

CUL-9 The project owner shall ensure that the CRS, alternate CRS, or CRMs monitor full time all ground disturbance at the project site, along the linear facilities

routes, and at laydown areas, roads, and other ancillary areas, to ensure there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner.

Full-time archaeological monitoring for this project shall be the archaeological monitoring of earth-removing activities for as long as the activities are ongoing. Where excavation equipment is actively removing dirt and hauling the excavated material farther than fifty feet from the location of active excavation, full-time archaeological monitoring shall require at least two monitors per excavation area. In this circumstance, one monitor shall observe the location of active excavation and a second monitor shall inspect the dumped material. For excavation areas where the excavated material is dumped no farther than fifty feet from the location of active excavation, one monitor shall both observe the location of active excavation and inspect the dumped material.

A Native American monitor shall be obtained to monitor ground disturbance in areas where Native American artifacts may be discovered. Contact lists of interested Native Americans and guidelines for monitoring shall be obtained from the Native American Heritage Commission. Preference in selecting a monitor shall be given to Native Americans with traditional ties to the area that shall be monitored. If efforts to obtain the services of a qualified Native American monitor are unsuccessful, the project owner shall immediately inform the CPM. The CPM will either identify potential monitors or will allow ground disturbance to proceed without a Native American monitor.

The research design in the CRMMP shall govern the collection, treatment, retention/disposal, and curation of any archaeological materials encountered.

On forms provided by the CPM, CRMs shall keep a daily log of any monitoring and other cultural resources activities and any instances of non-compliance with the Conditions and/or applicable LORS. Copies of the daily monitoring logs shall be provided by the CRS to the CPM, if requested by the CPM. From these logs, the CRS shall compile a monthly monitoring summary report to be included in the MCR. If there are no monitoring activities, the summary report shall specify why monitoring has been suspended.

The CRS or alternate CRS shall report daily to the CPM on the status of the project's cultural resources-related activities, unless reducing or ending daily reporting is requested by the CRS and approved by the CPM.

In the event that the CRS believes that the current level of monitoring is not appropriate in certain locations, a letter or e-mail detailing the justification for changing the level of monitoring shall be provided to the CPM for review and approval prior to any change in the level of monitoring.

The CRS, at his or her discretion, or at the request of the CPM, may informally discuss cultural resources monitoring and mitigation activities with Energy Commission technical staff.

Cultural resources monitoring activities are the responsibility of the CRS. Any interference with monitoring activities, removal of a monitor from duties assigned by the CRS, or direction to a monitor to relocate monitoring activities by anyone other than the CRS shall be considered non-compliance with these Conditions.

Upon becoming aware of any incidents of non-compliance with the Conditions and/or applicable LORS, the CRS and/or the project owner shall notify the CPM by telephone or e-mail within 24 hours. The CRS shall also recommend corrective action to resolve the problem or achieve compliance with the Conditions. When the issue is resolved, the CRS shall write a report describing the issue, the resolution of the issue, and the effectiveness of the resolution measures. This report shall be provided in the next MCR for the review of the CPM.

Verification:

1. At least ~~30~~<15> days prior to the start of ground disturbance, the CPM will provide to the CRS an electronic copy of a form to be used as a daily monitoring log.

2. Monthly, while monitoring is on-going, the project owner shall include in each MCR a copy of the monthly summary report of cultural resources-related monitoring prepared by the CRS and shall attach any new DPR 523A forms completed for finds treated prescriptively, as specified in the CRMMP.

3. At least 24 hours prior to implementing a proposed change in monitoring level, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication acceptable to the CPM) detailing the CRS's justification for changing the monitoring level.

4. Daily, as long as no cultural resources are found, the CRS shall provide a statement that "no cultural resources over 50 years of age were discovered" to the CPM as an e-mail or in some other form of communication acceptable to the CPM.

5. At least 24 hours prior to reducing or ending daily reporting, the project owner shall submit to the CPM, for review and approval, a letter or e-mail (or some other form of communication acceptable to the CPM) detailing the CRS's justification for reducing or ending daily reporting.

6. No later than 30 days following the discovery of any Native American cultural materials, the project owner shall submit to the CPM copies of the information transmittal letters sent to the Chairpersons of the Native American tribes or groups who requested the information. Additionally, the project owner shall submit to the

CPM copies of letters of transmittal for all subsequent responses to Native American requests for notification, consultation, and reports and records.

7. Within 15 days of receiving them, the project owner shall submit to the CPM copies of any comments or information provided by Native Americans in response to the project owner's transmittals of information.

CUL-10 The project owner shall grant authority to halt ground disturbance to the CRS, alternate CRS, and the CRMs in the event of a discovery. Redirection of ground disturbance shall be accomplished under the direction of the construction supervisor in consultation with the CRS.

In the event that a cultural resource over 50 years of age is found (or if younger, determined exceptionally significant by the CPM), or impacts to such a resource can be anticipated, ground disturbance shall be halted or redirected in the immediate vicinity of the discovery sufficient to ensure that the resource is protected from further impacts. Monitoring and daily reporting, as provided in other conditions, shall continue during the project's ground-disturbing activities elsewhere. The halting or redirection of ground disturbance shall remain in effect until the CRS has visited the discovery, and all of the following have occurred:

1. The CRS has notified the project owner, and the CPM has been notified within 24 hours of the discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning, including a description of the discovery (or changes in character or attributes), the action taken (i.e., work stoppage or redirection), a recommendation of CRHR eligibility, and recommendations for data recovery from any cultural resources discoveries, whether or not a determination of CRHR eligibility has been made.

2. If the discovery would be of interest to Native Americans, the CRS has notified all Native American groups that expressed a desire to be notified in the event of such a discovery.

3. The CRS has completed field notes, measurements, and photography for a DPR 523 "Primary" form. Unless the find can be treated prescriptively, as specified in the CRMMP, the "Description" entry of the DPR 523 "Primary" form shall include a recommendation on the CRHR eligibility of the discovery. The project owner shall submit completed forms to the CPM.

4. The CRS, the project owner, and the CPM have conferred, and the CPM has concurred with the recommended eligibility of the discovery and approved the CRS's proposed data recovery, if any, including the curation of the artifacts, or other appropriate mitigation; and any necessary data recovery and mitigation have been completed.

Verification:

1. At least ~~30~~<15> days prior to the start of ground disturbance, the project owner shall provide the CPM and CRS with a letter confirming that the CRS, alternate CRS, and CRMs have the authority to halt ground disturbance in the vicinity of a cultural resources discovery, and that the project owner shall ensure that the CRS notifies the CPM within 24 hours of a discovery, or by Monday morning if the cultural resources discovery occurs between 8:00 AM on Friday and 8:00 AM on Sunday morning.

2. Within 48 hours of the discovery of a resource of interest to Native Americans, the project owner shall ensure that the CRS notifies all Native American groups that expressed a desire to be notified in the event of such a discovery. Unless the discovery can be treated prescriptively, as specified in the CRMMP, completed DPR 523 forms for resources newly discovered during ground disturbance shall be submitted to the CPM for review and approval no later than 24 hours following the notification of the CPM, or 48 hours following the completion of data recordation/recovery, whichever the CRS decides is more appropriate for the subject cultural resource.

GEO-1 The two Alquist-Priolo faults (Pisgah fault and the Lavic Lake fault) shall be located (if actually present) by trenching or suitable geophysical methods with sufficient accuracy and confidence to assure that no occupied structures are placed within 50 feet, either side, of an established fault trace or any identified splays. Other structures deemed critical to the project, by the owner, may also be set back, as practical, imprudent and appropriate.

Verification: At least ~~90~~<30> days prior to ground breaking (prior to final project design) the project owner shall submit a fault evaluation report signed and stamped by a geologist licensed in the state of California. The evaluation shall include sufficient field exploration to establish whether or not either or both faults (or their splays) extend onto the project site. Surveyed locations shall be obtained for any faults encountered and a map showing the fault locations in relation to project structures shall be provided. On-site faults shall be considered active unless conclusive field evidence shows otherwise.

GEO-2 Because of the embankments on the downhill side, the proposed storm water detention basins constitute detention dams, some of which may be large enough to be under the jurisdiction of the State of California, Department of Water Resources, Division of Safety of Dams. Each detention dam site shall be characterized in a geotechnical investigation to establish foundation conditions and assess geologic hazards that affect embankment design. Appropriate geotechnical recommendations shall be provided for use in design and construction of the embankments and the associated storage area. All dams must be designed by a California licensed geotechnical or civil engineer familiar with design of small dams.

Verification: At least 60 days prior to ground breaking for the detention basins, the project owner shall submit a geotechnical investigation report covering each proposed detention basin. Appropriate geotechnical recommendations and specifications shall be provided for use in design and construction of the embankments and the associated storage area. All detention facilities can be included in a single report or in the overall final project geotechnical report. One set of stamped design drawings, typical of the detention dams, must be submitted by the project owner, prior to starting detention dam construction.

GEOLOGY AND PALEONTOLOGICAL RESOURCES

GEO-3 The California Department of Water Resources, Division of Safety of Dams reviews plans for all dams that impound 50 acre-feet of water or more. Embankments 6 feet high or less are excluded, regardless of storage capacity and embankments impounding less than 15 acre-feet of water are excluded, regardless of height. Any detention basin meeting the Division of Safety of Dams jurisdictional criteria for a dam shall be approved by the CPM after review by the Division of Safety of Dams.

Verification: If final detention basin design results in no jurisdictional dams, the project owner shall submit a letter of verification from the design engineer. If one or more detention basins fall within the jurisdictional criteria of the Division of Safety of Dams, the project owner shall submit copies of the design plans to the Division of Dams Safety of Dams. Upon completion of construction of jurisdictional dams, the project owner shall submit copies of as-built drawings to the Division of Safety of Dams.

PAL-1 The project owner shall provide the CPM with the resume and qualifications of its PRS for review and approval. If the approved PRS is replaced prior to completion of project mitigation and submittal of the Paleontological Resources Report, the project owner shall obtain CPM approval of the replacement PRS. The project owner shall keep resumes on file for qualified paleontological resource monitors (PRMs). If a PRM is replaced, the resume of the replacement PRM shall also be provided to the CPM.

The PRS resume shall include the names and phone numbers of references. The resume shall also demonstrate to the satisfaction of the CPM the appropriate education and experience to accomplish the required paleontological resource tasks.

As determined by the CPM, the PRS shall meet the minimum qualifications for a vertebrate paleontologist as described in the SVP guidelines of 1995. The experience of the PRS shall include the following:

1. Institutional affiliations, appropriate credentials, and college degree;

2. Ability to recognize and collect fossils in the field;

3. Local geological and biostratigraphic expertise;

4. Proficiency in identifying vertebrate and invertebrate fossils; and

5. At least 3 years of paleontological resource mitigation and field experience in California and at least one year of experience leading paleontological resource mitigation and field activities.

The project owner shall ensure that the PRS obtains qualified paleontological resource monitors to monitor as he or she deems necessary on the project. Paleontological resource monitors shall have the equivalent of the following qualifications:

- BS or BA degree in geology or paleontology and one year of experience monitoring in California; or

- AS or AA in geology, paleontology, or biology and 4 years' experience monitoring in California; or

- Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and 2 years of monitoring experience in California.

Verification: (1) At least ~~60~~<30> days prior to the start of ground disturbance, the project owner shall submit a resume and statement of availability of its designated PRS for on-site work.

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

(2) At least 20 days prior to ground disturbance, the PRS or project owner shall provide a letter with resumes naming anticipated monitors for the project, stating that the identified monitors meet the minimum qualifications for paleontological resource monitoring required by the condition. If additional monitors are obtained during the project, the PRS shall provide additional letters and resumes to the CPM. The letter shall be provided to the CPM no later than one week prior to the monitor's beginning on-site duties.

(3) Prior to the termination or release of a PRS, the project owner shall submit the resume of the proposed new PRS to the CPM for review and approval.

PAL-2 The project owner shall provide to the PRS and the CPM, for approval, maps and drawings showing the footprint of the power plant, construction lay-down areas, and all related facilities. Maps shall identify all areas of the project where ground disturbance is anticipated. If the PRS requests enlargements or strip maps for linear facility routes, the project owner shall provide copies to the PRS and CPM. The site grading plan and plan and profile drawings for the utility lines would be acceptable for this purpose. The plan drawings should show the location, depth, and extent of all ground disturbances and be at a scale between 1 inch = 40 feet and 1 inch = 100 feet. If the footprint of the project or its linear facilities changes, the project owner shall provide maps and drawings reflecting those changes to the PRS and CPM.

If construction of the project proceeds in phases, maps and drawings may be submitted prior to the start of each phase. A letter identifying the proposed schedule of each project phase shall be provided to the PRS and CPM. Before work commences on affected phases, the project owner shall notify the PRS and CPM of any construction phase scheduling changes.

At a minimum, the project owner shall ensure that the PRS or PRM consults weekly with the project superintendent or construction field manager to confirm area(s) to be worked the following week and until ground disturbance is completed.

Verification: (1) At least 30 days prior to the start of ground disturbance, the project owner shall provide the maps and drawings to the PRS and CPM.

(2) If there are changes to the footprint of the project, revised maps and drawings shall be provided to the PRS and CPM at least 15 days prior to the start of ground disturbance.

(3) If there are changes to the scheduling of the construction phases, the project owner shall submit a letter to the CPM within 5 days of identifying the changes.

PAL-3 The project owner shall ensure that the PRS prepares, and the project owner submits to the CPM for review and approval, a PRMMP to identify general and specific measures to minimize potential impacts to significant paleontological

resources. Approval of the PRMMP by the CPM shall occur prior to any ground disturbance. The PRMMP shall function as the formal guide for monitoring, collecting, and sampling activities and may be modified with CPM approval. This document shall be used as the basis of discussion when on-site decisions or changes are proposed. Copies of the PRMMP shall reside with the PRS, each monitor, the project owner's on-site manager, and the CPM.

The PRMMP shall be developed in accordance with the guidelines of the SVP (1995) and shall include, but not be limited, to the following:

1. Assurance that the performance and sequence of project-related tasks, such as any literature searches, pre-construction surveys, worker environmental training, fieldwork, flagging or staking, construction monitoring, mapping and data recovery, fossil preparation and collection, identification and inventory, preparation of final reports, and transmittal of materials for curation will be performed according to PRMMP procedures;

2. Identification of the person(s) expected to assist with each of the tasks identified within the PRMMP and the conditions of certification;

3. A thorough discussion of the anticipated geologic units expected to be encountered, the location and depth of the units relative to the project when known, and the known sensitivity of those units based on the occurrence of fossils either in that unit or in correlative units;

4. An explanation of why, how, and how much sampling is expected to take place and in what units. Include descriptions of different sampling procedures that shall be used for fine-grained and coarse-grained units;

5. A discussion of the locations of where the monitoring of project construction activities is deemed necessary, and a proposed plan for monitoring and sampling;

6. A discussion of procedures to be followed in the event of a significant fossil discovery, halting construction, resuming construction, and how notifications will be performed;

7. A discussion of equipment and supplies necessary for collection of fossil materials and any specialized equipment needed to prepare, remove, load, transport, and analyze large-sized fossils or extensive fossil deposits;

8. Procedures for inventory, preparation, and delivery for curation into a retrievable storage collection in a public repository or museum, which meet the Society of Vertebrate Paleontology's standards and requirements for the curation of paleontological resources;

9. Identification of the institution that has agreed to receive data and fossil materials collected, requirements or specifications for materials delivered for curation and how they will be met, and the name and phone number of the contact person at the institution; and

10. A copy of the paleontological conditions of certification.

Verification: At least 30 days prior to ground disturbance, the project owner shall provide a copy of the PRMMP to the CPM. The PRMMP shall include an affidavit of authorship by the PRS and acceptance of the PRMMP by the project owner evidenced by a signature.

PAL-4 Prior to ground disturbance and for the duration of construction activities involving ground disturbance, the project owner and the PRS shall prepare and conduct weekly CPM-approved training for the following workers: project managers, construction supervisors, foremen, and general workers involved with or who operate ground-disturbing equipment or tools. Workers shall not excavate in sensitive units prior to receiving CPM-approved worker training. Worker training shall consist of an initial in-person PRS training during the project kick off for those mentioned above. Following initial training, a CPM-approved video or in-person training may be used for new employees. The training program may be combined with other training programs prepared for cultural and biological resources, hazardous materials, or other areas of interest or concern. No ground disturbance shall occur prior to CPM approval of the Worker Environmental Awareness Program (WEAP), unless specifically approved by the CPM.

The WEAP shall address the possibility of encountering paleontological resources in the field, the sensitivity and importance of these resources, and legal obligations to preserve and protect those resources.

The training shall include:

1. A discussion of applicable laws and penalties under the law;

2. Good quality photographs or physical examples of vertebrate fossils for project sites containing units of high paleontological sensitivity;

3. Information that the PRS or PRM has the authority to halt or redirect construction in the event of a discovery or unanticipated impact to a paleontological resource;

4. Instruction that employees are to halt or redirect work in the vicinity of a find and to contact their supervisor and the PRS or PRM;

5. An informational brochure that identifies reporting procedures in the event of a discovery;

6. A WEAP certification of completion form signed by each worker indicating that he/she has received the training; and

7. A sticker that shall be placed on hard hats indicating that environmental training has been completed.

Verification: (1) At least 30 days prior to ground disturbance, the project owner shall submit the proposed WEAP, including the brochure, with the set of reporting procedures for workers to follow.

(2) At least 30 days prior to ground disturbance, the project owner shall submit the script and final video to the CPM for approval if the project owner is planning to use a video for interim training.

(3) If the owner requests an alternate paleontological trainer, the resume and qualifications of the trainer shall be submitted to the CPM for review and approval prior to installation of an alternate trainer. Alternate trainers shall not conduct training prior to CPM authorization.

(4) In the monthly compliance report (MCR), the project owner shall provide copies of the WEAP certification of completion forms with the names of those trained and the trainer or type of training (in-person or video) offered that month. The MCR shall also include a running total of all persons who have completed the training to date.

PAL-5 The project owner shall ensure that the PRS and PRM(s) monitor consistent with the PRMMP all construction-related grading, excavation, trenching, and augering in areas where potential fossil-bearing materials have been identified, both at the site and along any constructed linear facilities associated with the project. In the event that the PRS determines full-time monitoring is not necessary in locations that were identified as potentially fossil bearing in the PRMMP, the project owner shall notify and seek the concurrence of the CPM.

The project owner shall ensure that the PRS and PRM(s) have the authority to halt or redirect construction if paleontological resources are encountered. The project owner shall ensure that there is no interference with monitoring activities unless directed by the PRS. Monitoring activities shall be conducted as follows:

1. Any change of monitoring from the accepted schedule in the PRMMP shall be proposed in a letter or email from the PRS and the project owner to the CPM prior to the change in monitoring and will be included in the monthly compliance report. The letter or email shall include the justification for the change in monitoring and be submitted to the CPM for review and approval.

2. The project owner shall ensure that the PRM(s) keep a daily monitoring log of paleontological resource activities. The PRS may informally discuss paleontological resource monitoring and mitigation activities with the CPM at any time.

3. The project owner shall ensure that the PRS notifies the CPM within 24 hours of the occurrence of any incidents of non-compliance with any paleontological resources conditions of certification. The PRS shall recommend corrective action to resolve the issues or achieve compliance with the conditions of certification.

4. For any significant paleontological resources encountered, either the project owner or the PRS shall notify the CPM within 24 hours, or Monday morning in the case of a weekend event, where construction has been halted because of a paleontological find.

The project owner shall ensure that the PRS prepares a summary of monitoring and other paleontological activities placed in the monthly compliance reports. The summary will include the name(s) of PRS or PRM(s) active during the month; general descriptions of training and monitored construction activities; and general locations of excavations, grading, and other activities. A section of the report shall include the geologic units or subunits encountered, descriptions of samplings within each unit, and a list of identified fossils. A final section of the report will address any issues or concerns about the project relating to paleontological monitoring, including any incidents of non-compliance or any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the report shall include an explanation in the summary as to why monitoring was not conducted.

Verification: The project owner shall ensure that the PRS submits the summary of monitoring and paleontological activities in the MCR. When feasible, the CPM shall be notified 10 days in advance of any proposed changes in monitoring different from the plan identified in the PRMMP. If there is any unforeseen change in monitoring, the notice shall be given as soon as possible prior to implementation of the change.

PAL-6 The project owner, through the designated PRS, shall ensure that all components of the PRMMP are adequately performed including collection of fossil materials, preparation of fossil materials for analysis, analysis of fossils, identification and inventory of fossils, the preparation of fossils for curation, and the delivery for curation of all significant paleontological resource materials encountered and collected during project construction.

Verification: The project owner shall maintain in his/her compliance file copies of signed contracts or agreements with the designated PRS and other qualified research specialists. The project owner shall maintain these files for a period of 3 years after project completion and approval of the CPM-approved paleontological resource report

(see Condition of Certification **PAL-7).** The project owner shall be responsible for paying any curation fees charged by the museum for fossils collected and curated as a result of paleontological mitigation. A copy of the letter of transmittal submitting the fossils to the curating institution shall be provided to the CPM.

PAL-7 The project owner shall ensure preparation of a Paleontological Resources Report (PRR) by the designated PRS. The PRR shall be prepared following completion of the ground-disturbing activities. The PRR shall include an analysis of the collected fossil materials and related information and submit it to the CPM for review and approval.

The report shall include, but is not limited to, a description and inventory of recovered fossil materials; a map showing the location of paleontological resources encountered; determinations of sensitivity and significance; and a statement by the PRS that project impacts to paleontological resources have been mitigated below the level of significance.

Verification: Within 90 days after completion of ground-disturbing activities, including landscaping, the project owner shall submit the PRR under confidential cover to the CPM.

HAZ-1 The project owner shall not use any hazardous materials not listed in **Appendix A,** below, or in greater quantities than those identified by chemical name in **Appendix A,** unless approved in advance by the Compliance Project Manager (CPM).

Verification: The project owner shall provide to the CPM in the Annual Compliance Report, a list of hazardous materials contained at the facility.

HAZ-2 The project owner shall concurrently provide a Hazardous Materials Business Plan (HMBP), a Risk Management Plan (RMP) that includes the consequences of a train derailment resulting in a hydrogen pipeline leak and fire, and a Spill Prevention, Control, and Countermeasure Plan (SPCC) to the San Bernardino County Fire Department, and the CPM for review. After receiving comments from the San Bernardino County Fire Department, and the CPM, the project owner shall reflect all received recommendations in the final documents. If no comments are received from the county within 30 days of submittal, the project owner may proceed with preparation of final documents upon receiving comments from the CPM. Copies of the final HMBP, RMP, and SPCC Plan shall then be provided to the San Bernardino County Fire Department for their records and to the CPM for approval.

Verification: At least 60 days prior to receiving any hazardous material on the site for commissioning or operations, the project owner shall provide a copy of a final Hazardous Materials Business Plan (HMBP), ~~a Risk Management Plan (RMP),~~ and a Spill Prevention, Control, and Countermeasure Plan (SPCC) to the CPM for approval.

<At least 60 days prior to receiving any hydrogen on the site for commissioning or operations, the project owner shall provide a copy of a final Risk Management Plan (RMP) to the CPM for approval.>

HAZ-3 The project owner shall develop and implement a Safety Management Plan for delivery of liquid and gaseous hazardous materials. The plan shall include procedures, protective equipment requirements, training and a checklist. It shall also include a section describing all measures to be implemented to prevent mixing of incompatible hazardous materials. This plan shall be applicable during construction, commissioning, and operation of the power plant.

Verification: At least sixty (60) days prior to the delivery of any liquid or gaseous hazardous material to the facility, the project owner shall provide a Safety Management Plan as described above to the CPM for review and approval.

HAZ-4 At least thirty (30) days prior to commencing construction, a site-specific Construction Site Security Plan for the construction phase shall be prepared and made available to the CPM for review and approval. The Construction Security Plan shall include the following:

1. Perimeter security consisting of fencing enclosing the construction area;

2. Security guards;

3. Site access control consisting of a check-in procedure or tag system for construction personnel and visitors;

4. Written standard procedures for employees, contractors and vendors when encountering suspicious objects or packages on-site or off-site;

5. Protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency; and

6. Evacuation procedures.

Verification: At least thirty (30) days prior to commencing construction, the project owner shall notify the CPM that a site-specific Construction Security Plan is available for review and approval.

HAZ-5 The project owner shall prepare a site-specific Security Plan for the operational phase and shall be made available to the CPM for review and approval. The project owner shall implement site security measures addressing physical site security and hazardous materials storage. The level of security to be implemented shall not be less than that described below (as per NERC 2002).

The Operation Security Plan shall include the following:

1. Permanent full perimeter fence, at least 8 feet high around the Solar Field;

2. Main entrance security gate, either hand operable or motorized;

3. Evacuation procedures;

4. Protocol for contacting law enforcement and the CPM in the event of suspicious activity or emergency;

5. Written standard procedures for employees, contractors and vendors when encountering suspicious objects or packages on-site or off-site;

6. a. A statement (refer to sample, attachment “A”) signed by the project owner certifying that background investigations have been conducted on all project personnel. Background investigations shall be restricted to ascertain the accuracy of employee identity and employment history, and shall be conducted in accordance with state and federal law regarding security and privacy;

b. A statement(s) (refer to sample, attachment “B”) signed by the contractor or authorized representative(s) for any permanent contractors or other technical contractors (as determined by the CPM after consultation with the project owner) that are present at any time on the site to repair, maintain, investigate, or conduct any other technical duties involving critical components (as determined by the CPM after consultation with the project owner) certifying that background investigations have been conducted on contractor personnel that visit the project site.

7. Site access controls for employees, contractors, vendors, and visitors;

8. Closed circuit TV (CCTV) monitoring system, recordable, and viewable in the power plant control room and security station (if separate from the control room) with cameras able to pan, tilt, and zoom, have low-light capability, and are able to view the outside entrance to the control room and the front gate; and

9. Additional measures to ensure adequate perimeter security consisting of either:

   a. Security guard present 24 hours per day, 7 days per week, **OR**

   b. Power plant personnel on-site 24 hours per day, 7 days per week **and one** of the following: perimeter breach detectors **or** CCTV able to view both site entrance gates and 100 per cent of the power block area perimeter.

The project owner shall fully implement the security plans and obtain CPM approval of any substantive modifications to the security plans. The CPM may authorize modifications to these measures, or may require additional measures, such as protective barriers for critical power plant components or cyber security depending on circumstances unique to the facility or in response to industry-related standards, security concerns, or additional guidance provided by the U.S. Department of Homeland Security, the U.S. Department of Energy, or the North American Electrical Reliability Council, after consultation with appropriate law enforcement agencies and the applicant.

Verification: At least 30 days prior to the initial receipt of hazardous materials on-site, the project owner shall notify the CPM that a site-specific Operations Site Security Plan is available for review and approval. In the Annual Compliance Report, the project owner shall include a statement that all current project employee and appropriate contractor background investigations have been performed, and updated certification statements are appended to the Operations Security Plan. In the Annual Compliance Report, the project owner shall include a statement that the Operations

Security Plan includes all current hazardous materials transport vendor certifications for security plans and employee background investigations.

HAZ-6 The holder (project owner) shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b.

Verification: A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the CPM concurrent with the filing of the reports to the involved Federal agency or State government.

HAZ-7 The project owner shall ensure that whichever of the two proposed hydrogen storage and handling systems is used in the project, the system is reviewed, evaluated by a Mechanical Engineer registered in California to ensure that it complies with all applicable ANSI, ASME, and NFPA design codes, and that the system is and approved by this person as shown by applying a professional “stamp” to the document review page.

Verification: At least ~~60~~<30> days prior to ~~construction~~<receiving hydrogen on site>, the project owner shall provide to the CPM for review and approval a copy of design drawings, documentation, and specifications of the hydrogen storage and handling system that has been reviewed, evaluated, approved, and stamped by a Mechanical Engineer registered in the state of California.

HAZ-8 The project owner shall:

a. Conduct a process hazard analysis and prepare a Process Safety Management Plan (PSM Plan) that contains a hazard analysis using a Hazard and Operability Study (HAZOP).

b. Retain an independent outside third party group of professionals to provide peer review and approval of the process hazard analysis and the PSM plan before they are submitted to the CPM. The outside third party shall have expertise in engineering and process operations, shall include at least one member who has experience and knowledge specific to the processes being evaluated, and shall also include one member knowledgeable in the specific process hazard analysis methodologies being used.

The final report containing the results of the hazard analysis, the final PSM Plan, and the review and approval of the outside third party shall be submitted to the San Bernardino County Fire Department for review and to the CPM for approval.

Verification: At least thirty (30) days prior to receiving hydrogen gas on the site, the project owner shall provide a copy of a final hazard analysis, the final PSM Plan, and the review and approval of the outside third party to the CPM for approval.

DRAINAGE EROSION AND SEDIMENTATION CONTROL PLAN

SOIL&WATER-1 Prior to site mobilization, the project owner shall obtain the CPM's approval for a site specific Drainage, Erosion and Sediment Control Plan (DESCP) that ensures protection of water quality and soil resources of the project site and all linear facilities for both the construction and operation phases of the project. This plan shall address appropriate methods and actions, both temporary and permanent, for the protection of water quality and soil resources, demonstrate no increase in off-site flooding potential, and identify all monitoring and maintenance activities. The project owner shall complete all necessary engineering plans, reports, and documents necessary for the CMP to conduct a review of the proposed project and provide a written evaluation as to whether the proposed grading, drainage improvements, and flood management activities comply with all requirements presented herein. The plan shall be consistent with the grading and drainage plan as required by Condition of Certification **CIVIL-1** and shall contain the following elements:

- **Vicinity Map:** A map shall be provided indicating the location of all project elements with depictions of all major geographic features to include watercourses, washes, irrigation and drainage canals, major utilities, and sensitive areas.

- **Site Delineation:** The site and all project elements shall be delineated showing boundary lines of all construction areas and the location of all existing and proposed structures, underground utilities, roads, and drainage facilities. Adjacent property owners shall be identified on the plan maps. All maps shall be presented at a legible scale.

- **Drainage:** The DESCP shall include the following elements:

a. Topography. Topography for offsite areas is required to define the existing upstream tributary areas to the site and downstream to provide enough definition to map the existing storm water flow and flood hazard. Spot elevations shall be required where relatively flat conditions exist.

b. Proposed Grade. Proposed grade contours shall be shown at a scale appropriate for delineation of onsite ephemeral washes, drainage ditches, and tie-ins to the existing topography.

c. Hydrology. Existing and proposed hydrologic calculations for onsite areas and offsite areas that drain to the site; include maps showing the drainage area boundaries and sizes in acres, topography and typical overland flow directions, and show all existing, interim, and

proposed drainage infrastructure and their intended direction of flow.

d. Hydraulics. Provide hydraulic calculations to support the selection and sizing of the onsite drainage network, diversion facilities and BMPs.

- **Watercourses and Critical Areas:** The DESCP shall show the location of all onsite and nearby watercourses including washes, irrigation and drainage canals, and drainage ditches, and shall indicate the proximity of those features to the construction site. Maps shall identify high hazard flood prone areas.

- **Clearing and Grading:** The plan shall provide a delineation of all areas to be cleared of vegetation, areas to be preserved, and areas where vegetation would be cut to allow clear movement of the heliostats. The plan shall provide elevations, slopes, locations, and extent of all proposed grading as shown by contours, cross-sections, cut/fill depths or other means. The locations of any disposal areas, fills, or other special features shall also be shown. Existing and proposed topography tying in proposed contours with existing topography shall be illustrated. The DESCP shall include a statement of the quantities of material excavated at the site, whether such excavations or fill is temporary or permanent, and the amount of such material to be imported or exported or a statement explaining that there would be no clearing and/or grading conducted for each element of the project. Areas of no disturbance shall be properly identified and delineated on the plan maps.

- **Soil Wind and Water Erosion Control:** The plan shall address exposed soil treatments to be used during construction and operation of the proposed project for both road and non-road surfaces including the specific identification of all chemical-based dust palliatives, soil bonding, and weighting agents appropriate for use at the proposed project site that would not cause adverse effects to vegetation. BMPs shall include measures designed to prevent wind and water erosion including application of chemical dust palliatives after rough grading to limit water use. All dust palliatives, soil binders, and weighting agents shall be approved by the CPM prior to use. With regard to erosion risk and stormwater runoff, debris and detention basins shall be installed which are sized and located to intercept storm water flow from off-site areas as it enters the project site. On-site roadways and other infrastructure shall be designed and located to avoid existing and proposed flow paths to the extent feasible.

- **Project Schedule:** The DESCP shall identify on the topographic site map the location of the site-specific BMPs to be employed during each phase of construction (initial grading, project element construction, and final grading/stabilization). Separate BMP implementation schedules shall be provided for each project element for each phase of construction. This scheduling should require the installation of debris basins, detention/ infiltration basins, swales, and related storm water management facilities before construction commences on each phase.

- **Best Management Practices:** The DESCP shall show the location, timing, and maintenance schedule of all erosion- and sediment-control BMPs to be used prior to initial grading, during project element excavation and construction, during final grading/stabilization, and after construction. BMPs shall include measures designed to control dust and stabilize construction access roads and entrances. The maintenance schedule shall include post-construction maintenance of treatment-control BMPs applied to disturbed areas following construction.

- **Erosion Control Drawings:** The erosion-control drawings and narrative shall be designed, stamped and sealed by a professional engineer or erosion-control specialist.

- **Agency Comments:** The DESCP shall include copies of recommendations, conditions, and provisions from the County of San Bernardino, California Department of Fish and Game (CDFG), and Lahontan Regional Water Quality Control Board (RWQCB).

- **Monitoring Plan:** Monitoring activities shall include routine measurement of the volume of accumulated sediment in the onsite drainage ditches, and storm water diversions and the requirements specified in **Soil and Water Appendix B, C, and D.**

Verification: The DESCP shall be consistent with the grading and drainage plan as required by Condition of Certification **CIVIL-1,** and relevant portions of the DESCP shall clearly show approval by the chief building official (CBO). In addition, the project owner shall do all of the following:

a. No later than thirty (30) days prior to start of site mobilization, the project owner shall submit a copy of the DESCP to the County of San Bernardino, the RWQCB, and the CMP for review and comment. The CPM shall consider comments received from San Bernardino County and RWQCB.

b. During construction, the project owner shall provide an analysis in the monthly compliance report on the effectiveness of the drainage-, erosion- and sediment-control measures and the results of monitoring and maintenance activities.

c. Once operational, the project owner shall provide in the annual compliance report information on the results of storm water BMP monitoring and maintenance activities.

Provide the CPM with two (2) copies each of all monitoring or other reports required for compliance with San Bernardino County, CDFG, and RWQCB.

WASTE DISCHARGE REQUIREMENTS

SOIL&WATER-2 The project owner shall comply with the Waste Discharge Requirements presented in **Soil and Water Appendices B, C, D** and **E** for the construction and operation of the surface impoundments (evaporation ponds) and storm water management system. These requirements relate to discharges, or potential discharges, of waste that could affect the quality of waters of the state, and were developed in consultation with staff of the State Water Resources Control Board and/or the applicable California Regional Water Quality Control Board (hereafter "Water Boards"). It is the Commission's intent that these requirements be enforceable by both the Commission and the Water Boards. In furtherance of that objective, the Commission hereby delegates the enforcement of these requirements, and associated monitoring, inspection and annual fee collection authority, to the Water Boards.

Accordingly, the Commission and the Water Board shall confer with each other and coordinate, as needed, in the enforcement of the requirements. The project owner shall pay the annual waste discharge permit fee associated with this facility to the Water Boards. In addition, the Water Boards may "prescribe" these requirements as waste discharge requirements pursuant to Water Code Section 13263 solely for the purposes of enforcement, monitoring, inspection, and the assessment of annual fees, consistent with Public Resources Code Section 25531, subdivision (c).

Verification: No later than sixty (60) days prior to any wastewater or storm water discharge, the project owner shall provide documentation to the CPM, with copies to the LRWQCB, demonstrating compliance with the WDRs established in Appendices B, C, D and E. Any changes to the design, construction, or operation of the ponds or storm water system shall be requested in writing to the CPM, with copies to the LRWQCB, and approved by the CPM, in consultation with the LRWQCB, prior to initiation of any changes. The project owner shall provide to the CPM, with copies to the LRWQCB, all monitoring reports required by the WDRs, and fully explain any violations, exceedances, enforcement actions, or corrective actions related to construction or operation of the ponds or storm water system.

STORM WATER DAMAGE MONITORING AND RESPONSE PLAN

SOIL&WATER-3 The project owner shall ensure that all SunCatcher pole foundations are designed to withstand storm water scour from surface erosion

and/or channel migration based on a Pole Foundation Stability Report to be completed by a Professional Engineer and Professional Geologist. The Pole Foundation Stability Report shall establish a Minimum Depth Stability Threshold. The project owner shall also develop a Storm Water Damage Monitoring and Response Plan to evaluate potential impacts from storm water, including pole foundations that fail due to storm water flow or otherwise break and scatter mirror debris and other SunCatcher components on to the ground surface. The Storm Water Damage Monitoring and Response Plan shall include the following elements:

- Detailed maps showing the installed location of all SunCatcher pole foundations within each project phase, including existing and proposed drainage channels.

- Each SunCatcher pole foundation should be identified by a unique ID number marked to show initial ground surface at its base, and the depth to the tip of the pole below ground.

- Minimum Depth Stability Threshold to be maintained of SunCatcher pole foundations to meet long-term stability for applicable wind, water and debris loading effects;

- Above and below ground construction details of a typical installed SunCatcher pole foundation.

- BMPs to be employed to minimize the potential impact of broken mirrors to soil resources.

- Methods and response time of mirror cleanup and measures that may be used to mitigate further impact to soil resources from broken mirror fragments.

Monitor and Inspect Periodically, Before First Seasonal and After Every Storm Event:

- Security and Tortoise Exclusion Fence: Inspect for damage and buildup of sediment or debris.

- SunCatcher Pole Foundations within Drainages or Subject to Drainage Overflow: Inspect for tilting, mirror damage, depth of scour compared to foundation depth below ground and the Minimum Depth Stability Threshold, collapse, and downstream transport.

- Drainage Channels: Inspect for substantial migration or changes in depth, and transport of broken mirror glass.

- Constructed Diversion Channels: Inspect for scour and structural integrity issues caused by erosion, and for sediment and debris buildup.

Short-Term Incident-Based Response:

- Security and Tortoise Exclusion Fence: repair damage, and remove build-up of sediment and debris.

- SunCatcher Pole Foundations: Remove broken glass, damaged structures, and wiring from the ground, and for foundations no longer meeting the Minimum Depth Stability Threshold, either replace/reinforce or remove the SunCatcher to avoid exposure for broken glass.

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

- Constructed Diversion Channels: repair damage, maintain erosion control measures and remove built-up sediment and debris.

Long-Term Design-Based Response:

- Propose operation/BMP modifications to address ongoing issues. Include proposed changes to monitoring and response procedures, frequency, or standards.

- Replace/reinforce SunCatcher Pole Foundations no longer meeting the Minimum Depth Stability Threshold or remove the SunCatchers to avoid exposure for broken glass.

- Propose design modifications to address ongoing issues. This may include construction of active storm water management diversion channels and/or detention ponds.

Inspection, short-term incident response, and long-term design-based response may include activities both inside and outside of the approved right-of-way. For activities outside of the approved right-of-way, the applicant will notify BLM and acquire environmental review and approval before field activities begin.

Verification: At least thirty (30) days prior to commercial operation, the project owner shall submit to the CPM a copy of the Pole Foundation Stability Report and the Storm Water Damage Monitoring and Response Plan for review and approval prior to commercial operation. The project owner shall retain a copy of these documents onsite at the power plant at all times. The project owner shall prepare an annual summary of

the number of pole foundations failed, cause of the failures, and cleanup and mitigation performed for each failed pole foundation.

CONSTRUCTION AND OPERATIONS WATER USE

SOIL&WATER-4 The proposed project's use of groundwater for all construction activities shall not exceed 145 AFY. The proposed project's use of groundwater for all operational activities shall not exceed 21 AFY. Prior to the use of groundwater for construction, the project owner shall install and maintain metering devices as part of the water supply and distribution system to document project water use and to monitor and record in gallons per day the total volume(s) of water supplied to the project from the water source. The metering devices shall be operational for the life of the project.

Verification: At least thirty (30) days prior to the start of construction of the proposed project, the project owner shall submit to the CPM a copy of evidence that metering devices have been installed and are operational.

Beginning six (6) months after the start of construction, the project owner shall prepare a semi-annual summary of amount of water used for construction purposes. The summary shall include the monthly range (daily minimum and daily maximum) and monthly average of daily water usage in gallons per day.

The project owner shall prepare an annual summary, which will include daily usage, monthly range and monthly average of daily water usage in gallons per day, and total water used on a monthly and annual basis in AF. For years subsequent to the initial year of operation, the annual summary will also include the yearly range and yearly average water use by source. For calculating the total water use, the term "year" will correspond to the date established for the annual compliance report submittal.

SEPTIC SYSTEM AND LEACH FIELD REQUIREMENTS

SOIL&WATER-5 Prior to the start of construction, the project owner shall provide the design of a sanitary waste septic system that complies with the County of San Bernardino requirements for the construction and operation of the project's proposed sanitary waste septic system and leach field to the CPM for review and approval.

Project operation shall not commence until documentation equivalent to the County's required wastewater treatment system permits are issued by the County and approved by the CPM.

The project owner shall remain in compliance with the County requirements for the life of the project.

Verification: The Project owner shall submit all necessary information and the appropriate fee to the County of San Bernardino to ensure that the project has complied

with the county's sanitary waste disposal facilities requirements. A written assessment prepared by the County of San Bernardino confirming that the design of the project's sanitary waste septic system conforms with county requirements must be provided to the CPM for review and approval thirty (30) days prior to the start of site construction.

A written assessment prepared by the County of San Bernardino of the project's compliance with county's sanitary waste disposal facilities requirements must be provided to the CPM for review and approval sixty (60) days prior to the start of power plant operation.

DECOMMISSIONING PLAN

SOIL&WATER-6 The Project owner shall identify likely decommissioning scenarios and develop specific decommissioning plans for each scenario that will identify actions to be taken to avoid or mitigate long-term impacts related to water and wind erosion after decommissioning. Actions may include such measures as a decommissioning SWPPP, revegetation and restoration of disturbed areas, post-decommissioning maintenance, collection and disposal of project materials and chemicals, and access restrictions.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit decommissioning plans to the CPM for review and approval prior to site mobilization. The project owner shall amend these documents as necessary, with approval from the CPM, should the decommissioning scenario change in the future.

GROUNDWATER LEVEL MONITORING AND REPORTING PLAN

SOIL&WATER-7 The project owner shall submit a Groundwater Level Monitoring and Reporting Plan to San Bernardino County and to the CPM for review and approval in accordance with the County of San Bernardino Code Title 2, Division 3, Chapter 6, Article 5 (Desert Groundwater Management Ordinance).

The Groundwater Level Monitoring and Reporting Plan shall provide detailed methodology for monitoring background and site groundwater levels. Monitoring shall be conducted prior to construction, during construction, and throughout project operation. The primary objective for the monitoring is to establish pre-construction ~~and project related~~ groundwater level trends that can be quantitatively compared against observed and simulated trends ~~near the project pumping well and dedicated monitoring wells.~~<during construction and throughout project operation. > Water level measurements in the project's water supply well shall represent non-pumped conditions, and be collected a minimum of four hours after pump shut-down. Prior to project construction, monitoring shall commence to establish pre-construction base-line conditions and reporting shall include existing monitoring data collected in the project area useful for quantifying hydraulic gradients across the Pisgah Fault and between the Lavic Lake and Lower Mojave groundwater basins. The monitoring network shall therefore be designed to also incorporate and report

relevant ongoing monitoring and reporting activities currently occurring in existing groundwater wells located within the Lavic Lake and Lower Mojave groundwater basins.

In areas where groundwater elevation data is needed but existing wells are absent or do not represent the water-bearing zone from which the project water supply well extracts groundwater, ~~yhe~~<the> monitoring network shall be augmented with new monitoring wells.

Verification: The project owner shall complete the following:

1. At least ~~two (2) months~~<15 days> prior to power plant construction, a Groundwater Level Monitoring and Reporting Plan shall be submitted to the County of San Bernardino for review and comment before completion of Condition of Certification **SOIL& WATER-3,** and a copy of the County's comments and the plan shall be submitted the CPM for review and approval. The plan shall include a scaled map showing the site and vicinity, existing well locations, and proposed monitoring locations (both existing wells and <any >new monitoring wells proposed for construction). The map shall also include relevant natural and man-made features (existing and proposed as part of this project). The plan also shall provide: (1) well construction information and borehole lithology for each existing well proposed for use as a monitoring well; (2) description of proposed drilling and well installation methods for new wells; (3) proposed monitoring well design; and, (4) schedule for completion of the work.

2. At least ~~one (1) month~~<15 days> prior to construction, a Groundwater Level Network Report shall be submitted to the CPM. The report shall include a scaled map showing the final monitoring well network. It shall document the drilling methods employed, provide individual well construction as-builds, borehole lithology recorded from the drill cuttings, well development, and well survey results for all new wells. The well survey shall measure the location and elevation of the top of the well casing and reference point for all water level measurements, and shall include the coordinate system and datum for the survey measurements. Additionally, the report shall describe the water level monitoring equipment employed in the wells and document their deployment and use.

3. As part of the monitoring well network development, any newly constructed monitoring wells shall be permitted and constructed consistent with San Bernardino County and State specifications.

4. At least one (1) week prior to project construction, all water level monitoring data shall be provided to the CPM. The data transmittal shall include an assessment of pre-project water level trends, a summary of available climatic information (monthly average temperature and rainfall records from the nearest weather station), and a comparison and assessment of water level data.

5. After project construction and during project operations, the project owner shall submit the monitoring data annually to the CPM. The summary shall document water level monitoring methods, the water level data, water level plots, and a comparison between pre- and post-project start-up water level trends. The report shall also include a summary of actual water use conditions, monthly climatic information (temperature and rainfall), and a comparison and assessment of water level data. As part of this assessment, the project owner shall calculate water level trends and complete a 5-year projection of future water levels based on these trends and an evaluation of water supply reliability.

STORMWATER CONTROL/FLOOD PROTECTION DESIGN PLANS

SOIL&WATER-8: The project owner shall submit two (2) copies of the 30-percent, 60-percent and 90-percent design drawings for the grading and drainage facilities to the CPM for review and comment. The 30-percent, 60-percent and 90-percent design drawings for the grading and drainage facilities shall be accompanied by a basis of design report to convey and support the design approach. To prepare the grading and drainage facilities drawings and accompanying basis of design report, the project owner shall do the following:

1. Conduct an analysis to quantify the design discharges and associated volumes of water, debris, and sediment associated with the 100-year storm at the apex of the fan under current watershed conditions.

2. Conduct a geomorphic and hydraulic analysis to determine the maximum design storm that can be routed through the site utilizing existing fluvial washes that will not result in significant damage to proposed site infrastructure.

3. Conduct a geomorphic and biologic analysis to determine the minimum design storm that can be routed through the site utilizing existing fluvial washes that will provide the necessary sediment load through the site and “downstream areas” to maintain existing sensitive habitat needs, as described in the *Geomorphic Assessment of Calico Solar Project Site.* This analysis must consider and address the need for fine sand to support the existing sensitive habitat and the potential episodic nature of the associated dune complex evolution that depends upon El Niño events (i.e., wet winters occurring approximately every 3 to 7 years) delivering sediment to the lower fan and the accompanying La Niña events (i.e., dry winters occurring approximately every 3 to 7 years) eroding and transporting fine sands to these dunes through wind action.

4. Determine the pass through design storm that can be routed through the site unimpeded to deliver the necessary sediment load through the site to maintain existing sensitive habitat needs in “downstream areas” and not result in significant damage to proposed site infrastructure.

5. Size, locate, and design each detention basin to allow the pass through design storm to move through the site unimpeded while capturing larger design storm flows and related sediment and debris to protect the proposed infrastructure.

6. Convey design of each basin by showing supporting calculations and design drawings to convey the basin in plan view, cross-sections, depth to spillway, amount of freeboard to top of basin, basin volume to spillway, description of sidewall slopes, method of providing pass through design storm and related sediment unimpeded, method of providing erosion protection of basin side walls, inlet design, outlet design, spillway design, spillway erosion control, combined outlet maximum flow, transition from outlet to existing downstream fluvial wash, tortoise fence location and design, maintenance of tortoise fence, maintenance of basin, maintenance of excess sediment in basin from larger flood flows.

7. The project owner shall request comments from the Department of Water Resources Division of Safety of Dams (DSOD) for the plans and specifications for the construction of any dam(s) or reservoir(s) that are under DSOD jurisdiction prior to beginning construction, and forward all comments to the CPM.

8. For all flood control basin dams, the project owner shall provide at a minimum:

    - specific locations of basins and dams on appropriate scale map,
    - configuration of all basins and dams including basin-specific cross sections,
    - a description of all materials designed to be used in the construction of the dams,
    - footings designs,
    - designs of cutoff walls,
    - designs of keyways,
    - description and design of drainage pass though methods,
    - flow metering (ability to maintain maximum discharge to that of the maximum on-site flow design) technique and design,
    - method of and design of debris deflection (i.e. trash racks) for each basin,

- emergency spillway design,
- pass through pipe outlet energy dissipation method and design, and
- basin inlet erosion protection.

9. In addition to the criteria discussed above, the basis of design report shall also follow the procedures outlined in the following documents as far as is applicable:

    a. San Bernardino County Drainage Manual and 2007 Development Code (amended, March 25, 2010).

    b. Federal Emergency Management Agency Guidelines for Determining Flood Hazards on Alluvial Fans and Guidelines and Specifications for Flood Hazard Mapping Partners.

The project owner shall prepare a set of design specifications to supplement the 90-percent design drawings. Plans, specifications, computations and other data shall be prepared by persons properly licensed by the State of California. If the 60-percent plans or 90-percent plans and specifications do not comply with the appropriate Conditions of Certification, the necessary changes or revisions to the plans shall be made by the project owner. If the CPM finds that the work described in the plans and specifications conform to the Conditions of Certifications in the Energy Commission Decision and other pertinent LORS, then the project owner shall submit two (2) copies of the 100- percent set for CPM review and approval. All design drawings must be submitted on bound or stapled 24" x 36" size paper.

Verification: Prior to site mobilization, the project owner shall prepare preliminary (30-percent) grading and drainage facilities drawings and accompanying basis of design report for CPM review and approval. No later than 30 days after publication of the Energy Commission Decision, the 60-percent set of design drawings and accompanying basis of design report shall be submitted to the CPM for review and approval. The project owner shall submit the 90-percent design drawings and accompanying basis of design report to the CPM for review and approval after the person who originally drew the plan or their duly authorized agent addresses the CPM's 60-percent submittal comments and required changes. The 100-percent design drawings and specifications (construction documents) shall be signed and sealed by a Registered Professional Engineer in the State of California and submitted as the final, approved set of construction documents prior to site mobilization. Prior to initiation of site construction, the 100-percent design drawings and specifications (construction documents) shall be submitted along with the final basis of design report signed and sealed by a Registered Professional Engineer and a Registered Professional Geologist in the State of California to the CPM for review and approval.

Thirty (30) days prior to initiation of construction of any dams that would be considered under the jurisdiction of DSOD, the project owner shall receive approval for dam construction from the CPM based on comments the CPM has received from the DSOD for dam design adequacy.

WATER SUPPLY RELIABILITY

SOIL&WATER-9 The annual monitoring report required by **SOIL&WATER-7** shall include an evaluation of water supply reliability. Based on the results of this evaluation, the CPM may request the project owner develop and submit a Water Conservation and Alternative Water Supply Plan. The purpose of this plan is to curtail and minimize water use to remediate observed water level and storage declines in the water bearing zone utilized by the project until the <water level and storage declines have been resolved to the satisfaction of the CPM or until the >proposed alternative supply is available.

Verification: The project owner shall provide a Water Conservation Plan within thirty (30) days after the request of the CPM. The plan shall be implemented immediately upon approval by the CPM. Part of this plan shall include suspension of mirror washing until the water supply has stabilized or an alternative supply is available to provide the water. The project owner shall submit a Notice of Completion to the CPM within thirty (30) days of <resolving the water level and storage declines or >securing the alternative supply. The Notice of Completion shall list each plan component and document that it has been completed. Part of the documentation shall include water use records that show the conservation savings achieved. If development of an alternative water supply was part of the plan, the project owner shall provide all documentation, permits, as-builts, proof of a contract or other right to a long term supply and test results that may be required for the water supply. The Water Conservation Plan shall remain in effect until CPM approval of the project owner's Notice of Completion.

STORM WATER PERMITS

SOIL&WATER-10 NPDES GENERAL PERMIT FOR CONSTRUCTION ACTIVITY.

The project owner shall comply with the requirements of the general National Pollutant Discharge Elimination System (NPDES) permit for discharge of storm water associated with construction activity. The project owner shall submit copies of all correspondence between the project owner and the State Water Resources Control Board (SWRCB) or the LRWQCB regarding this permit to the CPM. The project owner shall also develop and implement a construction SWPPP for construction on the Calico solar project main site, laydown areas, pipeline, and transmission line.

Verification: The project owner shall submit a copy of the construction SWPPP to the CPM at least 10 days prior to site mobilization for review and approval, and retain a copy of the approved SWPPP on site throughout construction. The project owner shall submit copies of all correspondence between the project owner and the SWRCB or the

LRWQCB regarding the NPDES permit for the discharge of storm water associated with construction activity to the CPM within 10 days of its receipt or submittal. Copies of correspondence shall include the Notice of Intent sent to the SWRCB, the confirmation letter indicating receipt and acceptance of the Notice of Intent, any permit modifications or changes, and completion/permit Notice of Termination.

SOIL&WATER-11 INDUSTRIAL FACILITY SWPPP

The project owner shall comply with the requirements of the General NPDES Permit for Discharges of Storm Water Associated with Industrial Activity, including development of an Industrial Facility SWPPP. If the Regional or State Board finds the project does not require a General NPDES Permit for Discharges of Storm Water Associated with Industrial Activity, written confirmation from either board confirming this permit is not required would satisfy this condition.

Verification: The project owner shall submit a copy of the Industrial Facility SWPPP for operation of the project to the CPM at least 60 days prior to the start of commercial operation and shall retain a copy of the approved SWPPP on site throughout the life of the project. The project owner shall submit copies of all correspondence between the project owner and the LRWQCB regarding the general NPDES permit for discharge of storm water associated with industrial activity to the CPM within 10 days of its receipt or submittal. Copies of correspondence shall include the Notice of Intent sent by the project owner to the SWRCB, the confirmation letter indicating receipt and acceptance of the Notice of Intent, and any permit modifications or changes.

NOISE-1 At least 15 days prior to the start of ground disturbance, the project owner shall notify all residents within 2 miles of the site, by mail or other effective means, of the commencement of project construction. At the same time, the project owner shall establish a telephone number for use by the public to report any undesirable noise conditions associated with the construction and operation of the project and include that telephone number in the above notice. If the telephone is not staffed 24 hours per day, the project owner shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This telephone number shall be posted at the project site during construction in a manner visible to passersby. This telephone number shall be maintained until the project has been operational for at least one year.

Verification: Prior to ground disturbance, the project owner shall transmit to the Compliance Project Manager (CPM) a statement, signed by the project owner's project manager, stating that the above notification has been performed and describing the method of that notification, verifying that the telephone number has been established and posted at the site, and giving that telephone number.

NOISE COMPLAINT PROCESS

NOISE-2 Throughout the construction and operation of the project, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The project owner or authorized agent shall:

- Use the Noise Complaint Resolution Form (below), or a functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;
- Attempt to contact the person(s) making the noise complaint within 24 hours;
- Conduct an investigation to determine the source of noise related to the complaint;
- Take all feasible measures to reduce the noise at its source if the noise is project related; and
- Submit a report documenting the complaint and the actions taken. The report shall include: a complaint summary, including final results of noise reduction efforts, and if obtainable, a signed statement by the complainant stating that the noise problem is resolved to the complainant's satisfaction.

Verification: Within 5 days of receiving a noise complaint, the project owner shall file a copy of the Noise Complaint Resolution Form with the CPM, documenting the

resolution of the complaint. If mitigation is required to resolve a complaint, and the complaint is not resolved within a 3-day period, the project owner shall submit an updated Noise Complaint Resolution Form when the mitigation is implemented.

NOISE-3 The project owner shall submit to the CPM for review and approval a noise control program and a statement, signed by the project owner's project manager, 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.

Verification: At least 30 days prior to the start of ground disturbance, the project owner shall submit to the CPM the noise control program and the project owner's project manager's signed statement. The project owner shall make the program available to Cal/OSHA upon request.

NOISE RESTRICTIONS

NOISE-4 The project design and implementation shall include appropriate noise mitigation measures adequate to ensure that the operation of the project will not cause the noise levels due to plant operation alone to exceed an average of 51 dBA $_{Leq}$ measured at or near monitoring location SR2, and an average of 57 dBA $_{Leq}$ measured at or near monitoring location SR1.

No new pure-tone components shall be caused by the project. "Pure-tone" shall be understood to mean, for purposes of this condition, a prominent one-third octave band with prominence evaluated between adjacent one-third octave band project operation sound levels and using frequency-dependent prominence ratio criteria values similar to those defined by ANSI S1.13-2005 A.8.6. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

A. When the project first achieves a sustained output of 85% or greater of rated capacity, the project owner shall conduct a 25-hour community noise survey at monitoring location SR2, or at a closer location acceptable to the CPM. This survey shall also include measurement of one-third octave band sound pressure levels to ensure that no new pure-tone noise components have been caused by the project.

   During the period of this survey, the project owner shall also conduct a short-term survey of noise at monitoring location SL1 or at a closer location acceptable to the CPM. The short-term noise measurements at this location shall be conducted during morning, early afternoon, and evening hours.

   The measurement of power plant noise for the purposes of demonstrating compliance with this condition of certification may alternatively be made at

a location, acceptable to the CPM, closer to the plant (e.g., 400 feet from the plant boundary) and this measured level then mathematically extrapolated to determine the plant noise contribution at the affected residence. The character of the plant noise shall be evaluated at the affected receptor locations to determine the presence of pure tones or other dominant sources of plant noise.

B. If the results from the noise survey indicate that the power plant noise at the affected receptor sites exceeds the above specified values, mitigation measures shall be implemented to reduce noise to a level of compliance with these limits.

C. If the results from the noise survey indicate that pure tones are present, mitigation measures shall be implemented to eliminate the pure tones.

Verification: The survey shall take place within 30 days of the project first achieving a sustained output of 85% or greater of rated capacity. Within 15 days after completing the survey, the project owner shall submit a summary report of the survey to the CPM. Included in the survey report will be a description of any additional mitigation measures necessary to achieve compliance with the above listed noise limit, and a schedule, subject to CPM approval, for implementing these measures. When these measures are in place, the project owner shall repeat the noise survey.

Within 15 days of completion of the new survey, the project owner shall submit to the CPM a summary report of the new noise survey, performed as described above and showing compliance with this condition.

NOISE-5 Following the project's first achieving a sustained output of 80% or greater of rated capacity, the project owner shall conduct an occupational noise survey to identify the noise hazardous areas in the facility.

The survey shall be conducted by a qualified person in accordance with the provisions of Title 8, California Code of Regulations sections 5095–5099 and Title 29, Code of Federal Regulations section 1910.95. The survey results shall be used to determine the magnitude of employee noise exposure.

The project owner shall prepare a report of the survey results and, if necessary, identify proposed mitigation measures that will be employed to comply with the applicable California and federal regulations.

Verification: Within 30 days after completing the survey, the project owner shall submit the noise survey report to the CPM. The project owner shall make the report available to OSHA and Cal/OSHA upon request.

CONSTRUCTION TIME RESTRICTIONS

NOISE-6 Heavy equipment operation, including pile driving, and noisy construction[1] work relating to any project features shall be restricted to the times of day delineated below, unless a variance has been issued by San Bernardino County for limited nighttime construction, unless:

- the project owner obtains the consent of the homeowners at SR1 and SR2; or
- the CPM determines that the noise will not exceed the daytime ambient noise levels at SR1 and SR2 (as shown in **Noise Table 5**) by more than 10 dBA and the nighttime ambient noise levels at SR1 and SR2 (as shown in **Noise Table 5**) by more than 5 dBA; or
- construction that is expected to increase those daytime ambient noise levels at those locations by more than 10 dBA continues no longer than four consecutive weekends or construction that is expected to increase nighttime ambient noise levels at those locations by more than 5 dBA continues no longer than five consecutive nights.

Mondays through Saturdays: 7:00 a.m. to 7:00 p.m.

Sundays and Holidays: No Construction Allowed

Haul trucks and other engine-powered equipment shall be equipped with mufflers that meet all applicable regulations. Haul trucks shall be operated in accordance with posted speed limits. Truck engine exhaust brake use shall be limited to emergencies.

Verification: Prior to ground disturbance, the project owner shall transmit to the CPM a statement acknowledging that the above restrictions will be observed throughout the construction of the project. Prior to ground disturbance, a copy of the variance issued by the county, if one should be issued, shall be submitted to the CPM for review and approval.

At least 20 days prior to the start of construction activities to occur outside the above required schedule restrictions, the project owner shall submit to the CPM a letter showing the affected homeowner's consent. If the consent cannot be obtained, at least 15 days prior to the start of those activities, the project owner shall submit to the CPM

---

[1] Noisy Construction: "Noise that can potentially draw legitimate complaints."

Legitimate Complaint: "A legitimate noise complaint refers to a complaint about noise that is confirmed by the CPM to be disturbing, and that is caused by the Calico project as opposed to another source. A legitimate complaint constitutes a violation by the project of any noise condition of certification (as confirmed by the CPM), which is documented by an individual or entity affected by such noise."

 Workshare Professional comparison of interwovenSite://IMANDMS/ACTIVE/73473395/2 and interwovenSite://IMANDMS/ACTIVE/73473395/5. Performed on 8/23/2010.

documentation showing the expected construction noise levels at SR1 and SR2, the nature of the work, the time of day/night that work will occur, and the duration of the work.

REL-1 From the time of the Energy Commission's adoption of this condition of certification to the start of commercial operation of the Calico Solar Project, or to the closure of the Maricopa Plant, whichever occurs earlier, the project owner shall obtain and provide to the CPM quarterly data sets of reliability and maintenance data from the Maricopa Plant, including the following:

a) logs of equipment failure data and operational data for all major equipment, including power conversion units, drive mechanisms, and controls. These logs shall include major equipment and plant availability factors, and major equipment and plant forced outage rates, including their causes and durations

b) plant operating logs showing dates and times of dispatch, and power level of dispatch

During the first two years of the commercial operation of the Calico Solar Project, the project owner shall maintain quarterly data sets of reliability and maintenance data, including the information specified in paragraphs a) and b) above, for the Calico Solar Project and make the information available to the CPM upon request.

Verification: On a quarterly basis, the project owner shall submit the Maricopa project data described in paragraphs a) and b) above, to the CPM, and shall make the Calico Solar Project data available to the CPM upon request.

TRANS-1 Construction of All-Weather Roads and Bridge. If an easement is granted and the applicant begins construction, the applicant shall construct an all-weather road according to (1) California State Fire Marshall specifications as outlined in *California Fire Code* Section 902.2.1 et seq. These roads shall be constructed with appropriate materials, including culverts and paving, so that they will be safe for use in crossing washes at the site.

In addition, the applicant shall coordinate its activities with the BNSF Railway. Those activities include working with the Public Utilities Commission to ensure compliance with provisions of the *California Public Utilities Code* Sections 1201- 1220.

During construction of both the temporary and permanent road, temporary crossing of BNSF tracks, and permanent crossing of BNSF tracks, the applicant shall prepare and coordinate with BNSF Railway; California Public Utilities Commission; and Federal Railroad Administration a safety plan for ensuring that all state and federal safety requirements for railroad crossings are followed.

That plan shall be reviewed and coordinated with BNSF Railway, appropriate regulatory agencies, and the CPM to ensure compliance with all state and federal requirements and approved by those agencies s well as the CPM.

Verification: At least 30-days prior to the start of mobilization, right-of-way easements shall be obtained and presented to the CPM. In addition to the BSNF easement, the project owner shall provide the CPM a copy of all documents pertaining to approvals from the Federal Railroad Administration (FRA); and the California Public Utilities Commission (CPUC). A courtesy copy shall be provided to the California Department of Transportation (Caltrans), District 8 Office. Within 30 days after the completion of each road and railroad crossing improvements, the project owner shall provide the CPM with a copy of written approvals from BNSF, FRA, and CPUC as to the adequacy and safety of the roads and bridge.

TRANS-2 Traffic Control Plan. Prior to the start of construction for the Calico Solar Project, the project owner shall prepare and implement a traffic control plan (TPC) for the project's construction and operation traffic. The plan shall address the movement of workers, vehicles, and materials, including arrival and departure schedules and designated workforce and delivery routes.

For the project's construction period, the plan is to be designed to take into account any impediments that may or could occur because of the need to cross BNSF Railway tracks. In developing this plan the applicant is required to consider off-site parking and staging in designated areas and the use of buses to transport workers to and from the construction site.

Once the bridge is constructed, the applicant shall prepare a parking and staging plan to require all project-related parking to occur on-site or in designated off-site parking areas and that staging occurs on-site in a specifically-defined area.

The project owner shall consult with the BNSF Railway; County of San Bernardino; and the California Department of Transportation (Caltrans) District 8 office in the preparation and implementation of the plan and shall submit the proposed traffic control plan to the BNSF Railway; County of San Bernardino; and Department of Transportation (Caltrans) District 8 office in sufficient time for review and comment. The plan, along with any written comments from the BNSF Railway, County of San Bernardino; and Department of Transportation (Caltrans) District 8 office, shall then be submitted to the Energy Commission Compliance Program Manager (CPM) for review and approval prior to the proposed start of construction and implementation of the plan.

The traffic control plan shall include:

- A work schedule and end-of-shift departure plan designed to ensure that stacking does not occur on intersections necessary to enter and exit the project site. The project owner shall consider using one or more of the following measures designed to prevent stacking: (1) staggered work shifts; (2) off-peak work schedules; and (3) restricting travel to and departures from the project site to ten or fewer vehicles every three minutes during peak travel hours on Interstate 40.

- Provisions for at least two flaggers stationed at the BNSF Railway crossing during each day of construction until the proposed bridge is constructed and operating. Flaggers shall be present at the BNSF Railway crossing to ensure the safe crossing of workers, visitors, and delivery persons arriving and leaving the project site.

- Provisions for an incentive program such as an employer-sponsored Commuter Check Program to encourage construction workers to carpool or use van or bus service or both.

- Provisions for delivering and staging of heavy equipment and building material deliveries as well as for the movement of hazardous materials to the site.

- Limitation on truck deliveries to the project sites to only off-peak hours to ensure adequate exit and entry at appropriate intersections and railroad tracks.

- On I-40, provisions for direction and redirection of construction traffic with flag persons as necessary to ensure traffic safety and minimize interruptions to nonconstruction-related traffic flow.

- Placement of signage, lighting, and traffic control devices at the project construction site and laydown areas.

- Signage along eastbound and westbound appropriate roads and at the entrance of the Hector Road I-40 northbound and southbound off-ramps to notifying drivers of construction traffic throughout the duration of the construction period.

- A heavy-haul plan designed to address the transport and delivery of heavy and oversized loads requiring permits from Department of Transportation (Caltrans) or other state and federal agencies.

- Parking for workforce and construction vehicles, including consideration of off-site parking prior to opening of bridge across BNSF Railway tracks, to prevent stacking on I-40 roads and intersections and facilitate timely and safer crossing across tracks for workers, visitors, and delivery persons as well as for emergency access.

Verification: At least 30-days prior to the start of construction, including any grading or site remediation on the power plant site or its associated easements, the project owner shall submit the proposed traffic control plan to BNSF Railway; San Bernardino County; and the Department of Transportation (Caltrans) District 8 office for review and comment and to the CPM for review and approval. The project owner shall also provide the CPM with a copy of the transmittal letter to BNSF Railway; San Bernardino County; and the Department of Transportation (Caltrans) District 8 office requesting review and comment.

At least ~~60~~<30> calendar days prior to the start of construction, the project owner shall provide copies of any comment letters received from BNSF Railway; San Bernardino County; and the Department of Transportation (Caltrans) District 8 office along with any changes to the proposed traffic control plan for CPM review and approval.

TRANS-3 Limitations on Vehicle Size and Weight. Due to the dynamic nature of the construction environment, at least 30 days prior to the start of construction, the project owner shall consult with the BNSF Railway; San Bernardino County; and the Caltrans District 8 office to coordinate procedures for obtaining required and necessary easement and permits on an as-needed basis.

After consultation with BNSF Railway, San Bernarndino County, and the Caltrans District I office, the project owner shall prepare a coordination plan designed to comply with limitations imposed by California Department of

Transportation (Caltrans) District 8 office and other relevant jurisdictions including San Bernardino County, on vehicle sizes and weights. In addition, the project owner or its contractor shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for use of roadways.

Verification: At least 30-days prior to construction, a copy of the coordination plan shall be provided to the CPM for review and comment. In addition, the applicant shall provide copies of easements and permits obtained from BNSF Railway; San Bernardino County; and the Caltrans District 8 office to the CPM.

In the monthly compliance reports (MCRs), the project owner shall submit copies of any easements or permits or both received during that reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation. The project owner shall retain copies of BNSF Railway easements for the life of the project.

TRANS-4 Encroachment into Public Rights of Way. The project owner and its contractors shall comply with Caltrans and other relevant jurisdictions limitations for encroachment into public rights-of-way and shall obtain necessary encroachment permits from Caltrans and all relevant jurisdictions.

Verification: In the monthly compliance reports (MCRs), the project owner shall submit copies of permits received during the reporting period. In addition, the project owner shall retain copies of these permits and supporting documentation in its compliance file for at least six months after the start of commercial operation.

TRANS-5 Restoration of All Public Roads, Easements, and Rights-of-Way. The project owner shall restore all public roads, easements, and rights-of-way that have been damaged due to project-related construction activities to original or near-original condition in a timely manner, as directed by the CPM. Repairs and restoration of access roads may be required at any time during the construction phase of the project to ensure safe ingress and egress.

Verification: At least 30-days prior to the start of mobilization, the project owner shall photograph or videotape all affected public roads, easements, and right-of-way segments and/or intersections and shall provide the CPM, the affected local jurisdictions, and Caltrans (if applicable) with a copy of these images. The project owner shall rebuild, repair and maintain all public roads, easements, rights-of-way in a usable condition throughout the construction phase of the project.

In addition, the project owner shall consult with San Bernardino County and California Department of Transportation (Caltrans) District 8 and notify them of the proposed schedule for project construction. The purpose of this notification is to request that San Bernardino County and Caltrans consider postponement of public right-of-way repair or improvement activities in areas affected by project construction until construction is completed and to coordinate with the project owner regarding any concurrent construction-related activities that are planned or in progress and cannot be postponed.

The purpose of this requirement is to help ensure cooperation from San Bernardino County and Caltrans so that the applicant's construction work is accommodated and the project can be completed in a timely and safe manner.

TRANS-6 Permits/Licenses to Transport Hazardous Materials. The project owner shall ensure that permits and/or licenses are secured from the California Highway Patrol and Caltrans for the transport of hazardous materials.

Verification: The project owner shall include in its monthly compliance reports (MCRs), copies of all permits and licenses acquired by the project owner or contractors or both concerning the transport of hazardous substances.

TRANS-7 Prevention of Glare from SunCatchers to BNSF Train Crews and Motorists on Hector Road; Route 66; and Interstate 40

This condition of certification is divided into two sections. Section One concerns the testing of signals to ensure that they are easily visible to train engineers. Section Two concerns general location, operating, and reporting procedures pertaining to the SunCatcher mirrors.

I. Signal Light Modifications

Immediately after the installation of the first SunCatcher mirrors near the BNSF Railway right-of-way but before operation of the mirrors, the applicant will work with BNSF Railway to ensure that the operation of the SunCatcher mirrors will not interfere with the railroad engineers' ability to accurately see and respond to appropriate signal lights.

The applicant will work with BNSF Railway to determine the appropriate size and design of shields to be affixed to signal lights as well as measures to increase the contrast of the signal light, including orienting the appropriately sized shield around the signal light and increasing the brightness of the signal light emitter over historic light levels using current LED signal technology.

In addition, the applicant will work with BNSF Railway to determine emergency reporting procedures to immediately identify, report, and repair any malfunctioning or missing shield.

Verification: **Signal Light Modifications.** At least ~~120~~<45> days before the first SunCatchers are operated, the applicant shall consult with BNSF to prepare a plan to design, develop, and manufacture the appropriate shields to ensure that railroad engineers can accurately identify and respond properly to signal lights. As part of the development process, the applicant shall coordinate the development of the plan as well as the manufacture and installation of these shields with BNSF Railway, California Public Utilities Commission, and the CPM. The completed plan shall be submitted to the CPM for review and approval at least 30 days prior to the start of operations.

At least ~~60~~<30> days before the first SunCatchers are operated, the applicant shall consult with BNSF Railway to test the shielded signal lights to ensure that the railroad engineers can accurately identify and respond to the appropriate signal. The CPM shall also be notified when testing shall occur.

Once BNSF Railway, California Public Utilities Commission has accepted the modified shield and verified that it allows the railroad engineers to accurately identify and respond to the proper signal, the applicant, along with BNSF Railway, shall coordinate methods and reporting procedures to ensure their safe and effective use.

The applicant shall develop, with BNSF Railway's input and approval, a monitoring plan that shall provide for the immediate reporting of any defective shield as well as its immediate replacement. This plan shall include methods for coordinating and implementing these reporting procedures with all necessary federal, state, and local agencies as well as BNSF Railway. This monitoring plan shall be submitted to the CPM for review and approval.

In addition, the project owner shall provide the CPM a monthly report that includes the date, time, location, response, and response time of any malfunction, public complaint, or video detection covered by the emergency glare response program; any determinations made by the project owner as to cause of the problem; and methods taken to resolve the problem. A copy of these reports shall be kept by the project owner for at least five years.

II. General Location, Operating, and Reporting Procedures The project owner shall accomplish the following:

1. Modify the offset tracking procedure to use a 25-degree offset instead of the proposed 10-degree offset.

2. Ensure the morning stow position-to-offset position transitions occur at least 30 minutes before sunrise and end in the 25 % offset tracking position.

3. Ensure that the "Night Stow" should occur 30 minutes after sunset to avoid any intrusive light effects.

4. Ensure that the minimum distance from any SunCatcher reflector assembly to the BNSF right-of-way (ROW) or any public roadway shall be a minimum of 223 feet to reduce the possibility of temporary flash blindness. In addition, during the normal tracking and offset tracking positions, the project operator shall adhere to the following procedures and specifications.

5. Develop and implement an emergency glare response program that includes all of the following:

a. Monitoring plan that requires (1) the use of video surveillance trucks to identify and document intrusive light conditions, covering all hours of operation on a weekly basis for five years; and (2) monitoring of the status of individual SunCatchers during all hours of operation to immediately identify any malfunctioning units with the potential to create glare within the BNSF Railway right-of-way; or on I-40, Route 66, or Hector Road.

b. Procedures that allow motorists and train operators, including AMTRAK and BNSF, to report to the project owner, as well as to Caltrans, California Highway Patrol (CHP), and the County of San Bernardino. in the case of complaints from motorists, any problems with glint or glare resulting from the operation or malfunction of SunCatchers. The procedures developed by the applicant for public reporting of glare problems shall be developed in consultation with BNSF Railway, California Department of Transportation (Caltrans) District 8 office, California Highway Patrol (CHP), and San Bernardino County. These procedures shall include a toll-free number for reporting problems as well as a process for written notification to the project owner and to California Department of Transportation (Caltrans, District 8) and San Bernardino County, in the case of complaints from motorists; or to AMTRAK or BNSF Railway, or both, in the case of complaints from train operators or passengers.

c. Procedures for the immediate (1) repositioning of any malfunctioning units to avoid potential glare within the BNSF Railway right-of-way or on I-40, Route 66, or Hector Road; investigation and resolution of complaints received from train operators or motorists or both.

d. Process for evaluating intrusive light conditions identified by the video surveillance and determining, in consultation with the CPM, what operational or other changes may be warranted to reduce or eliminate the identified intrusion.

e. Procedures for documenting instances when malfunctioning units with the potential to create glare are identified, or when train operators or motorists complain of glare, and the actions taken in response to those instances or complaints.

f. Period reports to the Project CPM detailing instances of SunCatcher malfunction, public complaints about glare, or video-detected problems that are covered by the emergency glare response program.

Verification: General Location, Operating, and Reporting. At least ~~90~~<30> days before the first SunCatchers are tested or operated, the project owner shall submit documentation to the CPM necessary to verify that the operational measures and

setback requirements included in this condition of certification will be implemented and achieved.

At least ~~60~~<15> days before the SunCatchers are tested or operated, the project owner shall .submit to the CPM, for the CPM's review and approval, a copy of the project owner's draft emergency glare response program, including methods for coordinating and implementing the program with all state, county, and local agencies as well as BNFS Railway and AMTRAK.

Beginning no more than 30 days after the first SunCatchers are tested or operated and continuing for the duration of project operations, the project owner shall develop a procedure for any motorist, passenger, worker, train personnel, or visitor to report a malfunctioning unit and make those procedures known and available to those groups. The project owner shall provide the CPM a monthly report that includes the date, time, location, response, and response time of any malfunction, public complaint, or video detection covered by the emergency glare response program; any determinations made by the project owner as to cause of the problem; and methods taken to resolve the problem. A copy of these reports shall be kept by the project owner for at least five years.

TLSN-1 The project owner shall construct the proposed transmission line (anywhere along the area identified by the applicant as available for its routing) according to the requirements of California Public Utility Commission's GO-95, GO-52, GO-131-D, Title 8, and Group 2, High Voltage Electrical Safety Orders, sections 2700 through 2974 of the California Code of Regulations, and Southern California Edison's EMF reduction guidelines.

Verification: At least 30 days before starting the transmission line or related structures and facilities, the project owner shall submit to the Compliance Project Manager (CPM) a letter signed by a California registered electrical engineer affirming that the lines will be constructed according to the requirements stated in the condition.

TLSN-2 The project owner shall use a qualified individual to measure the strengths of the electric and magnetic fields from the line at the points of maximum intensity along the route for which the applicant provided specific estimates. The measurements shall be made before and after energization according to the American National Standard Institute/Institute of Electrical and Electronic Engineers (ANSI/IEEE) standard procedures. These measurements shall be completed no later than 6 months after the start of operations.

Verification: The project owner shall file copies of the pre-and post-energization measurements with the CPM within 60 days after completion of the measurements.

TLSN-3 The project owner shall ensure that the rights-of-way of the proposed transmission line are kept free of combustible material, as required under the provisions of section 4292 of the Public Resources Code and section 1250 of Title 14 of the California Code of Regulations.

Verification: During the first 5 years of plant operation, the project owner shall provide a summary of inspection results and any fire prevention activities carried out along the right-of-way and provide such summaries in the Annual Compliance Report on transmission line safety and nuisance-related requirements.

TLSN-4 The project owner shall ensure that all permanent metallic objects within the right-of-way of the project-related lines are grounded according to industry standards regardless of ownership. A minimum clearance of ~~300~~<223> feet shall be maintained between the proposed transmission line and the edge of the right-of-way for BNSF Railroad Company's railroad tracks.

Verification: At least 30 days before the lines are energized, the project owner shall transmit to the CPM a letter confirming compliance with this condition.

SURFACE TREATMENT OF NON-MIRROR PROJECT STRUCTURES AND BUILDINGS

VIS-1 ~~The~~<To the extent feasible, the> project owner shall treat all non-mirror surfaces of all project structures
and buildings visible to the public such that a) their colors minimize visual intrusion and contrast by blending with the existing tan and brown color of the surrounding landscape; b) their colors and finishes do not create excessive glare; and c) their colors and finishes are consistent with local policies and ordinances. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive. This measure shall include coloring of security fencing with vinyl or other non-reflective coating; or with slats or similar semi-opaque, non-reflective material, to blend to the greatest feasible extent with the background soil.

The project owner shall submit for CPM review and approval, a specific Surface Treatment Plan that will satisfy these requirements. The treatment plan shall include:

A. A description of the overall rationale for the proposed surface treatment, including the selection of the proposed color(s) and finishes;

B. A list of each major project structure, building, tank, pipe, and wall; the transmission line towers and/or poles; and fencing, specifying the color(s) and finish proposed for each. Colors must be identified by vendor, name, and number; or according to a universal designation system;

C. One set of color brochures or color chips showing each proposed color and finish;

D. A specific schedule for completion of the treatment; and

E. A procedure to ensure proper treatment maintenance for the life of the project.

The project owner shall not specify to the vendors the treatment of any buildings or structures treated during manufacture, or perform the final treatment on any buildings or structures treated in the field, until the project owner receives notification of approval of the treatment plan by the CPM. Subsequent modifications to the treatment plan are prohibited without CPM approval.

Verification: At least 90 days prior to specifying to the vendor the colors and finishes of the first structures or buildings that are surface treated during manufacture, the project owner shall submit the proposed treatment plan to the CPM for review and approval and simultaneously to San Bernardino County for review and comment. If the

CPM determines that the plan requires revision, the project owner shall provide to the CPM a plan with the specified revision(s) for review and approval by the CPM before any treatment is applied. Any modifications to the treatment plan must be submitted to the CPM for review and approval.

Prior to the start of commercial operation, the project owner shall notify the CPM that surface treatment of all listed structures and buildings has been completed and they are ready for inspection and shall submit to each one set of electronic color photographs from the same key observation points identified in (d) above. The project owner shall provide a status report regarding surface treatment maintenance in the Annual Compliance Report. The report shall specify a): the condition of the surfaces of all structures and buildings at the end of the reporting year; b) maintenance activities that occurred during the reporting year; and c) the schedule of maintenance activities for the next year.

TEMPORARY AND PERMANENT EXTERIOR LIGHTING

VIS-2 To the extent feasible and consistent with safety and security considerations, the project owner shall design and install all temporary and permanent exterior lighting so that:

a) lighting does not cause excessive reflected glare;

b) lighting does not illuminate the nighttime sky;

c) mounting heights and locations of all lighting fixtures, including roadway lighting, will not allow light to fall on the mirror surfaces of the SunCatchers in the stowed position,

d) illumination of the project and its immediate vicinity is minimized as to times of use and extent, and;

e) lighting on the exhaust stacks shall be the minimum needed to satisfy safety and security concerns.

Permanent night lighting shall comply with all applicable standards, practices, and regulations including, and specifically, the following Illuminating Engineering Society documents:

- RP-33-99 Lighting for Exterior Environments
- DG-13-99 Outdoor Lighting
- TM-1 0-00 Addressing Obtrusive Light (Urban Sky Glow and Light Trespass) in Conjunction with Roadway Lighting
- TM-1 5-07 Luminaire Classification System for Outdoor Luminaires

Verification: At least ~~90~~<30> days prior to ordering any exterior lighting, the project owner shall contact the CPM to show compliance with all of the above requirements. This shall include, but not be limited to, final lighting plans, fixture and control schedules, fixture and control cut sheets and specifications, a photometric plan showing vertical and horizontal footcandles at all property lines to a height of 20 feet, and the proposed time clock schedule.

Prior to construction and prior to commercial operation, the project owner shall notify the CPM that the installation of the temporary and permanent lighting has been completed and is ready for inspection. If after inspection the CPM notifies the project owner that modifications to the lighting are needed, within 30 days after receiving the notification the project owner shall implement the modifications and notify the CPM when the modifications are competed and ready for inspection.

Within 48 hours of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form as specified in the Compliance General Conditions, including a proposal to resolve the complaint, and a schedule for implementation of the proposed resolution. The project owner shall notify the CPM within 48 hours after completing the resolution of the complaint. A copy of the complaint resolution form report shall be submitted to the CPM within 30 days and included in the Annual Report.

SETBACK OF SUNCATCHERS FROM HIGHWAY I-40

VIS-3 To reduce the visual dominance and glare effects of the SunCatchers to motorists on Highway I-40, the applicant shall set back the nearest units to the area north of the existing pipeline right-of-way, and at a minimum distance of ~~360~~<223> feet from the edge of the roadway, whichever is greater.

Verification: At least ~~90~~<30> days prior to start of construction, the project owner shall present to BLM's Authorized Officer and the CPM a revised plan depicting how the proposed SunCatchers will be set back from the highway. If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a revised plan for review and approval by the CPM.

The project owner shall not begin construction until receiving CPM approval of the revised plan.

WASTE-1 The project owner shall provide the resume of an experienced and qualified professional engineer or professional geologist, who shall be available during site characterization (if needed), demolition, excavation, and grading activities, to the CPM for review and approval. The resume shall show experience in remedial investigation and feasibility studies.

The professional engineer or professional geologist shall be given authority by the project owner to oversee any earth moving activities that have the potential to disturb contaminated soil and impact public health, safety and the environment.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit the resume to the CPM for review and approval.

WASTE-2 If potentially contaminated soil is identified during site characterization, demolition, excavation or grading at either the proposed site or linear facilities, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the professional engineer or professional geologist shall inspect the site, determine the need for sampling to confirm the nature and extent of contamination, and provide a written report to the project owner, representatives of Department of Toxic Substances Control or Regional Water Quality Control Board, and the CPM stating the recommended course of action.

Depending on the nature and extent of contamination, the professional engineer or professional geologist shall have the authority to temporarily suspend construction activity at that location for the protection of workers or the public. If in the opinion of the professional engineer or professional geologist, significant remediation may be required, the project owner shall contact the CPM and representatives of the Department of Toxic Substances Control or Regional Water Quality Control Board, for guidance and possible oversight.

Verification: The project owner shall submit any reports filed by the professional engineer or professional geologist to the CPM within 5 days of their receipt. The project owner shall notify the CPM within 24 hours of any orders issued to halt construction.

WASTE-3 The project owner shall prepare a Construction Waste Management Plan for all wastes generated during construction of the facility and shall submit the plan to the CPM for review and approval prior to the start of construction. The plan shall contain, at a minimum, the following:

- A description of all construction waste streams, including projections of frequency, amounts generated, and hazard classifications; and

- Management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans.

Verification: The project owner shall submit the Construction Waste Management Plan to the CPM for approval no less than 30 days prior to the initiation of construction activities at the site.

WASTE-4 The project owner shall obtain a hazardous waste generator identification number from the United States Environmental Protection Agency (U.S.EPA) prior to generating any hazardous waste during project construction and operations.

Verification: The project owner shall keep a copy of the identification number on file at the project site and provide documentation of the hazardous waste generation and notification and receipt of the number to the CPM in the next scheduled Monthly Compliance Report after receipt of the number. Submittal of the notification and issued number documentation to the CPM is only needed once unless there is a change in ownership, operation, waste generation, or waste characteristics that requires a new notification to U.S.EPA. Documentation of any new or revised hazardous waste generation notifications or changes in identification number shall be provided to the CPM in the next scheduled compliance report.

WASTE-5 Upon notification of any impending waste management-related enforcement action by any local, state, or federal authority, the project owner shall notify the CPM of any such action taken or proposed against the project itself, or against any waste hauler or disposal facility or treatment operator with which the owner contracts, and describe how the violation will be corrected.

Verification: The project owner shall notify the CPM in writing within 10 days of becoming aware of an impending enforcement action. The CPM shall notify the project owner of any changes that will be required in the way project-related wastes are managed.

WASTE-6 The project owner shall provide a reuse/recycling plan for at least 50 percent of construction and demolition materials prior to any building or demolition. The project owner shall ensure compliance and shall provide proof of compliance documentation to the CPM, including a recycling and reuse summary report, receipts, and records of measurement. Project mobilization and construction shall not proceed until the CPM issues an approval document.

Verification: At least 30 days prior to the start of any construction or demolition activities, the project owner shall submit a reuse recycling plan to the CPM for review and approval. The project owner shall ensure that project activities are consistent with the approved reuse/recycling plan and provide adequate documentation of the types and volumes of wastes generated, how the wastes were managed, and volumes of wastes diverted. Project mobilization and construction shall not proceed until CPM issues an approval document. Not later than 60 days after completion of project construction, the project owner shall submit documentation of compliance with the diversion program requirements to the CPM. The required documentation shall include a recycling and reuse summary report along with all necessary receipts and records of measurement from entities receiving project wastes.

WASTE-7 The project owner shall prepare an Operation Waste Management Plan for all wastes generated during operation of the proposed project and shall submit the plan to the CPM for review and approval. The plan shall contain, at a minimum, the following:

- A detailed description of all operation and maintenance waste streams, including projections of amounts to be generated, frequency of generation, and waste hazard classifications;

- Management methods to be used for each waste stream, including temporary on-site storage, housekeeping and best management practices to be employed, treatment methods and companies providing treatment services, waste testing methods to assure correct classification, methods of transportation, disposal requirements and sites, and recycling and waste minimization/source reduction plans;

- Information and summary records of conversations with the local Certified Unified Program Agency and the Department of Toxic Substances Control regarding any waste management requirements necessary for project activities. Copies of all required waste management permits, notices, and/or authorizations shall be included in the plan and updated as necessary;

- A detailed description of how facility wastes will be managed, and any contingency plans to be employed, in the event of an unplanned closure or planned temporary facility closure; and

- A detailed description of how facility wastes will be managed and disposed of upon closure of the facility.

Verification: The project owner shall submit the Operation Waste Management Plan to the CPM for approval no less than 30 days prior to the start of project operation. The project owner shall submit any required revisions to the CPM within 20 days of notification from the CPM that revisions are necessary.

The project owner shall also document in each Annual Compliance Report the actual volume of wastes generated and the waste management methods used during the year; provide a comparison of the actual waste generation and management methods used to those proposed in the original Operation Waste Management Plan; and update the Operation Waste Management Plan as necessary to address current waste generation and management practices.

WASTE-8 The project owner shall ensure that all spills or releases of hazardous substances, hazardous materials, or hazardous waste are documented and cleaned up and that wastes generated from the release/spill are properly managed and disposed of, in accordance with all applicable federal, state, and local requirements.

Verification: The project owner shall document management of all unauthorized releases and spills of hazardous substances, hazardous materials, or hazardous wastes that occur on the project property or related linear facilities. The documentation shall include, at a minimum, the following information: location of release; date and time of release; reason for release; volume released; how release was managed and material cleaned up; amount of contaminated soil and/or cleanup wastes generated; if the release was reported; to whom the release was reported; release corrective action and cleanup requirements placed by regulating agencies; level of cleanup achieved and actions taken to prevent a similar release or spill; and disposition of any hazardous wastes and/or contaminated soils and materials that may have been generated by the release. A copy of the unauthorized release/spill documentation shall be provided to the CPM within 30 days of the date the release was discovered.

WORKER SAFETY-1 The project owner shall submit to the Compliance Project Manager (CPM) a copy of the Project Construction Safety and Health Program containing the following:

- A Construction Personal Protective Equipment Program;
- A Construction Exposure Monitoring Program;
- A Construction Injury and Illness Prevention Program;
- A Construction heat stress protection plan that implements and expands on existing Cal OSHA regulations as found in 8 CCR 3395;
- A Construction Emergency Action Plan; and
- A Construction Fire Prevention Plan.

The Personal Protective Equipment Program, the Exposure Monitoring, the Personal Protective Equipment Program, the Exposure Monitoring Program, the Heat Stress Protection Plan, and the Injury and Illness Prevention Program shall be submitted to the CPM for review and approval concerning compliance of the program with all applicable safety orders. These plans shall include programs to prevent exposure of workers to the unusual hazard of high intensity reflected light from the solar parabolic mirrors. The Construction Emergency Action Plan and the Fire Prevention Plan shall be submitted to the San Bernardino County Fire Department for review and comment prior to submittal to the CPM for approval.

Verification: At least thirty (30) days prior to the start of construction, the project owner shall submit to the CPM for review and approval a copy of the Project Construction Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the San Bernardino County Fire Department stating the fire department's comments on the Construction Fire Prevention Plan and Emergency Action Plan.

WORKER SAFETY-2 The project owner shall submit to the CPM a copy of the Project Operations and Maintenance Safety and Health Program containing the following:

- An Operation Injury and Illness Prevention Plan;
- An Operation heat stress protection plan that implements and expands on existing Cal OSHA regulations (8 CCR 3395);

- A Best Management Practices (BMP) for the storage and application of herbicides;
- An Emergency Action Plan;
- Hazardous Materials Management Program;
- Fire Prevention Program (8 CCR § 3221); and;
- Personal Protective Equipment Program (8 CCR §§ 3401-3411).

The Operation Injury and Illness Prevention Plan, Emergency Action Plan, the Heat Stress Protection Plan, BMP for Herbicides, and Personal Protective Equipment Program shall be submitted to the CPM for review and approval concerning compliance of the programs with all applicable safety orders. These plans shall include programs to prevent exposure of workers to the unusual hazard of high intensity reflected light from the solar parabolic mirrors. The Fire Prevention Plan and the Emergency Action Plan shall also be submitted to the San Bernardino County Fire Department for review and comment.

Verification: At least thirty (30) days prior to the start of operations, the project owner shall submit to the CPM for approval a copy of the Project Operations and Maintenance Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the San Bernardino County Fire Department stating the Fire Department's comments on the Operations Fire Prevention Plan and Emergency Action Plan.

WORKER SAFETY-3 The project owner shall provide a site Construction Safety Supervisor (CSS) who, by way of training and/or experience, is knowledgeable of power plant construction activities and relevant laws, ordinances, regulations, and standards, is capable of identifying workplace hazards relating to the construction activities, and has authority to take appropriate action to assure compliance and mitigate hazards. The CSS shall:

- Have overall authority for coordination and implementation of all occupational safety and health practices, policies, and programs;
- Assure that the safety program for the project complies with Cal/OSHA and federal regulations related to power plant projects;
- Assure that all construction and commissioning workers and supervisors receive adequate safety training;
- Complete accident and safety-related incident investigations, emergency response reports for injuries, and inform the CPM of safety-related incidents; and

- Assure that all the plans identified in Worker Safety 1 and 2 are implemented.

Verification: At least thirty (30) days prior to the start of site mobilization, the project owner shall submit to BLM's authorized officer and the CPM the name and contact information for the Construction Safety Supervisor (CSS). The contact information of any replacement (CSS) shall be submitted to the CPM within one business day.

The CSS shall submit in the Annual Compliance Report documentation of monthly safety inspection reports to include:

- Record of all employees trained for that month (all records shall be kept on site for the duration of the project);
- Summary report of safety management actions and safety-related incidents that occurred during the month;
- Report of any continuing or unresolved situations and incidents that may pose danger to life or health; and
- Report of accidents and injuries that occurred during the month.

WORKER SAFETY-4 The project owner shall make payments to the Chief Building Official (CBO) for the services of a Safety Monitor based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. Those services shall be in addition to other work performed by the CBO. The Safety Monitor shall be selected by and report directly to the CBO, and will be responsible for verifying that the Construction Safety Supervisor, as required in Worker Safety 3, implements all appropriate Cal/OSHA and Commission safety requirements. The Safety Monitor shall conduct on-site (including linear facilities) safety inspections at intervals necessary to fulfill those responsibilities.

Verification: At least thirty (30) days prior to the start of construction, the project owner shall provide proof of its agreement to fund the Safety Monitor services to BLM's authorized officer and the CPM for review and approval.

WORKER SAFETY-5 The project owner shall ensure that a portable automatic external defibrillator (AED) is located on site during construction and operations and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times. During construction and commissioning, the following persons shall be trained in its use and shall be on-site whenever the workers that they supervise are on-site: the Construction Project Manager or delegate, the Construction Safety Supervisor or delegate, and all shift foremen. During operations, all power plant employees shall be trained in its use. The training

program shall be submitted to BLM's authorized officer and the CPM for review and approval.

Verification: At least thirty (30) days prior to the start of site mobilization the project owner shall submit to BLM's authorized officer and the CPM proof that a portable AED exists on site and a copy of the training and maintenance program for review and approval.

WORKER SAFETY-6 ~~The~~<Prior to Phase 1b, the> project owner shall:

a. Provide secondary access gates for emergency personnel to enter the southern and northern portions of the site. These secondary access gates shall be at least one-quarter mile from the primary access points and may be restricted to emergency response personnel.

b. Provide a second access road or roads that serve both the northern portion of the site and the southern portion of the site. This road(s) shall be ~~at a minimum an all-weather gravel road~~<treated with Soiltac or its equivalent>, at least 20 feet wide, and with culverts to direct flow under the road at any wash the road may cross. The secondary emergency access road may cross the BNSF tracks at an at-grade crossing.

c. Maintain the main access road and the secondary access roads and provide a plan for implementation.

d. Provide an above-grade crossing of the BNSF tracks between the southern and northern portions of the site.

Plans for the secondary access gates, the method of gate operation, ~~gravel~~ secondary emergency access road(s), the above-grade crossing, and to maintain the roads shall be submitted to the San Bernardino County Fire Department for review and comment and to the CPM for review and approval.

Verification: At least thirty (30) days prior to the start of site mobilization< for Phase 1b>, the project owner shall submit to the San Bernardino County Fire Department and the CPM preliminary plans showing the location and dimensions of the secondary access gates to both the southern and northern portions of the site, a description of how the gates will be opened by the fire department, and a description and map showing the location, dimensions, and composition of the main road, location of the secondary ~~gravel~~ emergency access road(s) to the southern and northern portions of the site, and the engineering drawings and precise location of the above-grade crossing structure. At least thirty (30) days prior to the start of site mobilization, the project owner shall submit final plans plus the road maintenance plan to the CPM review and approval. The final plan submittal shall also include a letter containing comments from the San Bernardino County Fire Department or a statement that no comments were received.

WORKER SAFETY-7 The project owner shall either:

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

or

(2) Shall fund its share of the capital costs in the amount of $1,187,000 and provide an annual payment of $1,095,000 to the SBCFD for the support of new fire department staff and operations and maintenance commencing with the start of construction and continuing annually thereafter on the anniversary until the final date of power plant decommissioning.

Verification: At least thirty (30) days prior to the start of site mobilization, the project owner shall provide to the CPM:

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

or

(2) Documentation that the its share of the capital cost has been paid to the SBCFD, documentation that the first and subsequent annual payments have been made, and shall also provide evidence in each January Monthly Compliance Report during construction and the Annual Compliance Report during operation that subsequent annual payments have been made.

WORKER SAFETY-8 The project owner shall develop and implement an enhanced Dust Control Plan that includes the requirements described in **AQ-SC3** and additionally requires:

i. site worker use of dust masks (NIOSH N-95 or better) whenever visible dust is present;

ii. implementation of methods equivalent to Rule 402 of the Kern County Air Pollution Control District (as amended Nov. 3, 2004); and

iii. implementation of enhanced dust control methods (increased frequency of watering, use of dust suppression chemicals, etc. consistent with **AQ-SC4)** immediately whenever visible dust comes from or onto the site or when PM10 measurements obtained when implementing ii (above) exceed 50 µg/m^3.

Verification: At least thirty (30) days prior to the commencement of site mobilization, the enhanced Dust control Plan shall be provided to the CPM for review and approval.

GEN-1 The project owner shall design, construct, and inspect the project in accordance with the 2007 California Building Standards Code (CBSC), also known as Title 24, California Code of Regulations, which encompasses the California Building Code (CBC), California Building Standards Administrative Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Fire Code, California Code for Building Conservation, California Reference Standards Code, and all other applicable engineering LORS in effect at the time initial design plans are submitted to the CBO for review and approval (the CBSC in effect is the edition that has been adopted by the California Building Standards Commission and published at least 180 days previously). The project owner shall ensure that all the provisions of the above applicable codes are enforced during the construction, addition, alteration, moving, demolition, repair, or maintenance of the completed facility. All transmission facilities (lines, switchyards, switching stations and substations) are covered in the conditions of certification in the **TRANSMISSION SYSTEM ENGINEERING** section of this document.

In the event that the initial engineering designs are submitted to the CBO when the successor to the 2007 CBSC is in effect, the 2007 CBSC provisions shall be replaced with the applicable successor provisions. Where, in any specific case, different sections of the code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern.

The project owner shall ensure that all contracts with contractors, subcontractors, and suppliers clearly specify that all work performed and materials supplied comply with the codes listed above.

Verification: Within 30 days following receipt of the certificate of occupancy, the project owner shall submit to the CPM a statement of verification, signed by the responsible design engineer, attesting that all designs, construction, installation, and inspection requirements of the applicable LORS and the Energy Commission's decision have been met in the area of facility design. The project owner shall provide the CPM a copy of the certificate of occupancy within 30 days of receipt from the CBO.

Once the certificate of occupancy has been issued, the project owner shall inform the CPM at least 30 days prior to any construction, addition, alteration, moving, demolition, repair, or maintenance to be performed on any portion(s) of the completed facility that requires CBO approval for compliance with the above codes. The CPM will then determine if the CBO needs to approve the work.

GEN-2 Before submitting the initial engineering designs for CBO review, the project owner shall furnish the CPM and the CBO with a schedule of facility design submittals, and master drawing and master specifications lists. The schedule

shall contain a list of proposed submittal packages of designs, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide specific packages to the CPM upon request.

Verification: At least ~~60~~<30> days (or a project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO and to the CPM the schedule, the master drawing and master specifications lists of documents to be submitted to the CBO for review and approval. These documents shall be the pertinent design documents for the major structures and equipment listed in **Facility Design Table 2,** below. Major structures and equipment shall be added to or deleted from the table only with CPM approval. The project owner shall provide schedule updates in the monthly compliance report.

Facility Design Table 2
Major Structures and Equipment List

Equipment/System	Quantity (Plant)
SunCatcher Power Generating Unit (CT) Foundation and Connections	1 Lot
Administration Building Structure, Foundation and Connections	1
Maintenance Building Structure, Foundation and Connections	1
Assembly Building Structure, Foundation and Connections	3
Collector Group Generator Step-up Unit Transformer Foundation and Connections	1 Lot
Generator Collection Power Center	1 Lot
Generator Collection Sub-panel	1 Lot
Power Factor Capacitor	1 Lot
Open Bus Switch Rack	6
Shunt Capacitor Bank	6
Dynamic VAR Compression System	6
Disconnect Switch	15
Power Transformer Foundation and Connections	6
Coupling Capacitor Voltage Transformer Foundation and Connections	6
Diesel Power Generator Set Foundation and Connections	1
Fire Water Pump Foundation and Connections	1
Water Treatment System Foundation and Connections	1
Potable/Fire Water Tank Structure, Foundation and Connections	1
Well Water Storage Tank Structure, Foundation and Connections	1
Demineralized Water Storage Tank Structure, Foundation and Connections	2
Hydrogen Bottles Storage Area	1 Lot
Chemical Storage Area	1 Lot
Drainage Systems (including sanitary drain and waste)	1 Lot
High Pressure and Large Diameter Piping and Pipe Racks	1 Lot

Equipment/System	Quantity (Plant)
HVAC and Refrigeration Systems	1 Lot
Temperature Control and Ventilation Systems (including water and sewer connections)	1 Lot
Building Energy Conservation Systems	1 Lot

GEN-3 The project owner shall make payments to the CBO for design review, plan checks, and construction inspections, based upon a reasonable fee schedule to be negotiated between the project owner and the CBO. These fees may be consistent with the fees listed in the 2007 CBC, adjusted for inflation and other appropriate adjustments; may be based on the value of the facilities reviewed; may be based on hourly rates; or may be otherwise agreed upon by the project owner and the CBO.

Verification: The project owner shall make the required payments to the CBO in accordance with the agreement between the project owner and the CBO. The project owner shall send a copy of the CBO's receipt of payment to the CPM in the next monthly compliance report indicating that applicable fees have been paid.

GEN-4 Prior to the start of rough grading, the project owner shall assign a California-registered architect, or a structural or civil engineer, as the resident engineer (RE) in charge of the project. All transmission facilities (lines, switchyards, switching stations, and substations) are addressed in the conditions of certification in the **TRANSMISSION SYSTEM ENGINEERING** section of this document.

The RE may delegate responsibility for portions of the project to other registered engineers. Registered mechanical and electrical engineers may be delegated responsibility for mechanical and electrical portions of the project, respectively. A project may be divided into parts, provided that each part is clearly defined as a distinct unit. Separate assignments of general responsibility may be made for each designated part.

The RE shall:

1. Monitor progress of construction work requiring CBO design review and inspection to ensure compliance with LORS;

2. Ensure that construction of all facilities subject to CBO design review and inspection conforms in every material respect to applicable LORS, these conditions of certification, approved plans, and specifications;

3. Prepare documents to initiate changes in approved drawings and specifications when either directed by the project owner or as required by the conditions of the project;

4. Be responsible for providing project inspectors and testing agencies with complete and up-to-date sets of stamped drawings, plans, specifications, and any other required documents;

5. Be responsible for the timely submittal of construction progress reports to the CBO from the project inspectors, the contractor, and other engineers who have been delegated responsibility for portions of the project; and

6. Be responsible for notifying the CBO of corrective action or the disposition of items noted on laboratory reports or other tests when they do not conform to approved plans and specifications.

The resident engineer (or his delegate) must be located at the project site, or be available at the project site within a reasonable period of time, during any hours in which construction takes place.

The RE shall have the authority to halt construction and to require changes or remedial work if the work does not meet requirements.

If the RE or the delegated engineers are reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

Verification: At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the resume and registration number of the RE and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the RE and other delegated engineer(s) within 5 days of the approval.

If the RE or the delegated engineer(s) is subsequently reassigned or replaced, the project owner has 5 days to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within 5 days of the approval.

GEN-5 Prior to the start of rough grading, the project owner shall assign at least one of each of the following California registered engineers to the project: a civil engineer; a soils, geotechnical, or civil engineer experienced and knowledgeable in the practice of soils engineering; and an engineering geologist. Prior to the start of construction, the project owner shall assign at least one of each of the following California registered engineers to the project: a design engineer who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; a mechanical engineer; and an electrical engineer. (California Business and Professions Code section 6704 et seq., and sections 6730, 6731 and 6736 require state registration to practice as a civil engineer

or structural engineer in California). All transmission facilities (lines, switchyards, switching stations, and substations) are handled in the conditions of certification in the **TRANSMISSION SYSTEM ENGINEERING** section of this document.

The tasks performed by the civil, mechanical, electrical, or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (for example, proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer.

The project owner shall submit, to the CBO for review and approval, the names, qualifications, and registration numbers of all responsible engineers assigned to the project.

If any one of the designated responsible engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications and registration number of the newly assigned responsible engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer.

A. The civil engineer shall:

    1. Review the foundation investigations, geotechnical, or soils reports prepared by the soils engineer, the geotechnical engineer, or by a civil engineer experienced and knowledgeable in the practice of soils engineering;

    2. Design (or be responsible for the design of), stamp, and sign all plans, calculations, and specifications for proposed site work, civil works, and related facilities requiring design review and inspection by the CBO. At a minimum, these include: grading, site preparation, excavation, compaction, construction of secondary containment, foundations, erosion and sedimentation control structures, drainage facilities, underground utilities, culverts, site access roads and sanitary sewer systems; and

    3. Provide consultation to the RE during the construction phase of the project and recommend changes in the design of the civil works facilities and changes to the construction procedures.

B. The soils engineer, geotechnical engineer, or civil engineer experienced and knowledgeable in the practice of soils engineering, shall:

    1. Review all the engineering geology reports;

2. Prepare the foundation investigations, geotechnical, or soils reports containing field exploration reports, laboratory tests, and engineering analysis detailing the nature and extent of the soils that could be susceptible to liquefaction, rapid settlement or collapse when saturated under load;

3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with requirements set forth in the 2007 CBC (depending on the site conditions, this may be the responsibility of either the soils engineer, the engineering geologist, or both); and

4. Recommend field changes to the civil engineer and RE.

This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform to the predicted conditions used as the basis for design of earthwork or foundations.

C. The engineering geologist shall:

1. Review all the engineering geology reports and prepare a final soils grading report; and

2. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with the requirements set forth in the 2007 CBC (depending on the site conditions, this may be the responsibility of either the soils engineer, the engineering geologist, or both).

D. The design engineer shall:

1. Be directly responsible for the design of the proposed structures and equipment supports;

2. Provide consultation to the RE during design and construction of the project;

3. Monitor construction progress to ensure compliance with engineering LORS;

4. Evaluate and recommend necessary changes in design; and

5. Prepare and sign all major building plans, specifications, and calculations.

E. The mechanical engineer shall be responsible for, and sign and stamp a statement with, each mechanical submittal to the CBO, stating that the proposed final design plans, specifications, and calculations conform to all

of the mechanical engineering design requirements set forth in the Energy Commission's decision.

F. The electrical engineer shall:

1. Be responsible for the electrical design of the project; and

2. Sign and stamp electrical design drawings, plans, specifications, and calculations.

Verification: At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible civil engineer, soils (geotechnical) engineer and engineering geologist assigned to the project.

At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of construction, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible design engineer, mechanical engineer, and electrical engineer assigned to the project.

The project owner shall notify the CPM of the CBO's approvals of the responsible engineers within 5 days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner has 5 days in which to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within 5 days of the approval.

GEN-6 Prior to the start of an activity requiring special inspection, including prefabricated assemblies, the project owner shall assign to the project, qualified and certified special inspector(s) who shall be responsible for the special inspections required by the 2007 CBC. All transmission facilities (lines, switchyards, switching stations, and substations) are handled in conditions of certification in the **TRANSMISSION SYSTEM ENGINEERING** section of this document.

A certified weld inspector, certified by the American Welding Society (AWS), and/or American Society of Mechanical Engineers (ASME) as applicable, shall inspect welding performed on-site requiring special inspection (including structural, piping, tanks and pressure vessels).

The special inspector shall:

1. Be a qualified person who shall demonstrate competence, to the satisfaction of the CBO, for inspection of the particular type of construction requiring special or continuous inspection;

2. Inspect the work assigned for conformance with the approved design drawings and specifications;

3. Furnish inspection reports to the CBO and RE. All discrepancies shall be brought to the immediate attention of the RE for correction, then, if uncorrected, to the CBO and the CPM for corrective action; and

4. Submit a final signed report to the RE, CBO, and CPM, stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans, specifications, and other provisions of the applicable edition of the CBC.

Verification: At least 15 days (or project owner- and CBO-approved alternative time frame) prior to the start of an activity requiring special inspection, the project owner shall submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s), or other certified special inspector(s) assigned to the project to perform one or more of the duties set forth above. The project owner shall also submit to the CPM a copy of the CBO's approval of the qualifications of all special inspectors in the next monthly compliance report.

If the special inspector is subsequently reassigned or replaced, the project owner has 5 days in which to submit the name and qualifications of the newly assigned special inspector to the CBO for approval. The project owner shall notify the CPM of the CBO's approval of the newly assigned inspector within 5 days of the approval.

GEN-7 If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend required corrective actions. The discrepancy documentation shall be submitted to the CBO for review and approval. The discrepancy documentation shall reference this condition of certification and, if appropriate, applicable sections of the CBC and/or other LORS.

Verification: The project owner shall transmit a copy of the CBO's approval of any corrective action taken to resolve a discrepancy to the CPM in the next monthly compliance report. If any corrective action is disapproved, the project owner shall advise the CPM, within 5 days, of the reason for disapproval and the revised corrective action to obtain CBO's approval.

GEN-8 The project owner shall obtain the CBO's final approval of all completed work that has undergone CBO design review and approval. The project owner shall request the CBO to inspect the completed structure and review the submitted documents. The project owner shall notify the CPM after obtaining the CBO's final approval. The project owner shall retain one set of approved engineering plans, specifications, and calculations (including all approved changes) at the project site or at another accessible location during the operating life of the project. Electronic copies of the approved plans, specifications, calculations,

and marked-up as-builts shall be provided to the CBO for retention by the CPM.

Verification: Within 15 days of the completion of any work, the project owner shall submit to the CBO, with a copy to the CPM, in the next monthly compliance report, (a) a written notice that the completed work is ready for final inspection, and (b) a signed statement that the work conforms to the final approved plans. After storing the final approved engineering plans, specifications, and calculations described above, the project owner shall submit to the CPM a letter stating both that the above documents have been stored and the storage location of those documents.

Within 90 days of the completion of construction, the project owner shall provide to the CBO three sets of electronic copies of the above documents at the project owner's expense. These are to be provided in the form of "read only" (Adobe .pdf 6.0) files, with restricted (password-protected) printing privileges, on archive quality compact discs.

CIVIL-1 The project owner shall submit to the CBO for review and approval the following:

1. Design of the proposed drainage structures and the grading plan;

2. An erosion and sedimentation control plan;

3. Related calculations and specifications, signed and stamped by the responsible civil engineer; and

4. Soils, geotechnical, or foundation investigations reports required by the 2007 CBC.

Verification: At least 15 days (or project owner- and CBO-approved alternative time frame) prior to the start of site grading the project owner shall submit the documents described above to the CBO for design review and approval. In the next monthly compliance report following the CBO's approval, the project owner shall submit a written statement certifying that the documents have been approved by the CBO.

CIVIL-2 The resident engineer shall, if appropriate, stop all earthwork and construction in the affected areas when the responsible soils engineer, geotechnical engineer, or the civil engineer experienced and knowledgeable in the practice of soils engineering identifies unforeseen adverse soil or geologic conditions. The project owner shall submit modified plans, specifications, and calculations to the CBO based on these new conditions. The project owner shall obtain approval from the CBO before resuming earthwork and construction in the affected area.

Verification: The project owner shall notify the CPM within 24 hours, when earthwork and construction is stopped as a result of unforeseen adverse geologic/soil conditions. Within 24 hours of the CBO's approval to resume earthwork and construction in the affected areas, the project owner shall provide to the CPM a copy of the CBO's approval.

CIVIL-3 The project owner shall perform inspections in accordance with the 2007 CBC. All plant site-grading operations, for which a grading permit is required, shall be subject to inspection by the CBO.

If, in the course of inspection, it is discovered that the work is not being performed in accordance with the approved plans, the discrepancies shall be reported immediately to the resident engineer, the CBO, and the CPM. The project owner shall prepare a written report, with copies to the CBO and the CPM, detailing all discrepancies, non-compliance items, and the proposed corrective action.

Verification: Within 5 days of the discovery of any discrepancies, the resident engineer shall transmit to the CBO and the CPM a non-conformance report (NCR), and

the proposed corrective action for review and approval. Within 5 days of resolution of the NCR, the project owner shall submit the details of the corrective action to the CBO and the CPM. A list of NCRs, for the reporting month, shall also be included in the following monthly compliance report.

CIVIL-4 After completion of finished grading and erosion and sedimentation control and drainage work, the project owner shall obtain the CBO's approval of the final grading plans (including final changes) for the erosion and sedimentation control work. The civil engineer shall state that the work within his/her area of responsibility was done in accordance with the final approved plans.

Verification: Within 30 days (or project owner- and CBO-approved alternative time frame) of the completion of the erosion and sediment control mitigation and drainage work, the project owner shall submit to the CBO, for review and approval, the final grading plans (including final changes) and the responsible civil engineer's signed statement that the installation of the facilities and all erosion control measures were completed in accordance with the final approved combined grading plans, and that the facilities are adequate for their intended purposes, along with a copy of the transmittal letter to the CPM. The project owner shall submit a copy of the CBO's approval to the CPM in the next monthly compliance report.

STRUC-1 Prior to the start of any increment of construction of any major structure or component listed in **Facility Design Table 2** of condition of certification **GEN-2,** above, the project owner shall submit to the CBO for design review and approval the proposed lateral force procedures for project structures and the applicable designs, plans and drawings for project structures. Proposed lateral force procedures, designs, plans and drawings shall be those for the following items (from **Table 2,** above):

1. Major project structures;

2. Major foundations, equipment supports, and anchorage; and

3. Large field-fabricated tanks.

Construction of any structure or component shall not begin until the CBO has approved the lateral force procedures to be employed in designing that structure or component.

The project owner shall:

1. Obtain approval from the CBO of lateral force procedures proposed for project structures;

2. Obtain approval from the CBO for the final design plans, specifications, calculations, soils reports, and applicable quality control procedures. If there are conflicting requirements, the more stringent shall govern (for example, highest loads, or lowest allowable stresses shall govern). All plans, calculations, and specifications for foundations that support structures shall be filed concurrently with the structure plans, calculations, and specifications;

3. Submit to the CBO the required number of copies of the structural plans, specifications, calculations, and other required documents of the designated major structures prior to the start of on-site fabrication and installation of each structure, equipment support, or foundation;

4. Ensure that the final plans, calculations, and specifications clearly reflect the inclusion of approved criteria, assumptions, and methods used to develop the design. The final designs, plans, calculations, and specifications shall be signed and stamped by the responsible design engineer; and

5. Submit to the CBO the responsible design engineer's signed statement that the final design plans conform to applicable LORS.

Verification: At least ~~60~~<30> days (or project owner- and CBO-approved alternative time frame) prior to the start of any increment of construction of any structure or

component listed in **Facility Design Table 2** of condition of certification **GEN-2,** above, the project owner shall submit to the CBO the above final design plans, specifications and calculations, with a copy of the transmittal letter to the CPM.

The project owner shall submit to the CPM, in the next monthly compliance report, a copy of a statement from the CBO that the proposed structural plans, specifications, and calculations have been approved and comply with the requirements set forth in applicable engineering LORS.

STRUC-2 The project owner shall submit to the CBO the required number of sets of the following documents related to work that has undergone CBO design review and approval:

1. Concrete cylinder strength test reports (including date of testing, date sample taken, design concrete strength, tested cylinder strength, age of test, type and size of sample, location and quantity of concrete placement from which sample was taken, and mix design designation and parameters);

2. Concrete pour sign-off sheets;

3. Bolt torque inspection reports (including location of test, date, bolt size, and recorded torques);

4. Field weld inspection reports (including type of weld, location of weld, inspection of non-destructive testing (NDT) procedure and results, welder qualifications, certifications, qualified procedure description or number (ref: AWS); and

5. Reports covering other structural activities requiring special inspections shall be in accordance with the 2007 CBC.

Verification: If a discrepancy is discovered in any of the above data, the project owner shall, within 5 days, prepare and submit an NCR describing the nature of the discrepancies and the proposed corrective action to the CBO, with a copy of the transmittal letter to the CPM. The NCR shall reference the condition(s) of certification and the applicable CBC chapter and section. Within 5 days of resolution of the NCR, the project owner shall submit a copy of the corrective action to the CBO and the CPM.

The project owner shall transmit a copy of the CBO's approval or disapproval of the corrective action to the CPM within 15 days. If disapproved, the project owner shall advise the CPM, within 5 days, the reason for disapproval, and the revised corrective action to obtain CBO's approval.

STRUC-3 The project owner shall submit to the CBO design changes to the final plans required by the 2007 CBC, including the revised drawings, specifications, calculations, and a complete description of, and supporting

rationale for, the proposed changes, and shall give to the CBO prior notice of the intended filing.

Verification: On a schedule suitable to the CBO, the project owner shall notify the CBO of the intended filing of design changes, and shall submit the required number of sets of revised drawings and the required number of copies of the other above-mentioned documents to the CBO, with a copy of the transmittal letter to the CPM. The project owner shall notify the CPM, via the monthly compliance report, when the CBO has approved the revised plans.

STRUC-4 Tanks and vessels containing quantities of toxic or hazardous materials exceeding amounts specified in the 2007 CBC shall, at a minimum, be designed to comply with the requirements of that chapter.

Verification: At least 30 days (or project owner- and CBO-approved alternate time frame) prior to the start of installation of the tanks or vessels containing the above specified quantities of toxic or hazardous materials, the project owner shall submit to the CBO for design review and approval final design plans, specifications, and calculations, including a copy of the signed and stamped engineer's certification.

The project owner shall send copies of the CBO approvals of plan checks to the CPM in the following monthly compliance report. The project owner shall also transmit a copy of the CBO's inspection approvals to the CPM in the monthly compliance report following completion of any inspection.

MECH-1 The project owner shall submit, for CBO design review and approval, the proposed final design, specifications and calculations for each plant major piping and plumbing system listed in **Facility Design Table 2,** condition of certification **GEN-2,** above. Physical layout drawings and drawings not related to code compliance and life safety need not be submitted. The submittal shall also include the applicable QA/QC procedures. Upon completion of construction of any such major piping or plumbing system, the project owner shall request the CBO's inspection approval of that construction.

The responsible mechanical engineer shall stamp and sign all plans, drawings, and calculations for the major piping and plumbing systems, subject to CBO design review and approval, and submit a signed statement to the CBO when the proposed piping and plumbing systems have been designed, fabricated, and installed in accordance with all of the applicable laws, ordinances, regulations and industry standards, which may include, but are not limited to:

- American National Standards Institute (ANSI) B31 .1 (Power Piping Code);
- ANSI B31 .2 (Fuel Gas Piping Code);
- ANSI B31 .3 (Chemical Plant and Petroleum Refinery Piping Code);
- ANSI B31 .8 (Gas Transmission and Distribution Piping Code);
- Title 24, California Code of Regulations, Part 5 (California Plumbing Code);
- Title 24, California Code of Regulations, Part 6 (California Energy Code, for building energy conservation systems and temperature control and ventilation systems);
- Title 24, California Code of Regulations, Part 2 (California Building Code); and
- San Bernardino County codes.

The CBO may deputize inspectors to carry out the functions of the code enforcement agency.

Verification: At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of any increment of major piping or plumbing construction listed in **Facility Design Table 2,** condition of certification **GEN-2,** above, the project owner shall submit to the CBO for design review and approval the final plans, specifications, and calculations, including a copy of the signed and stamped statement from the

responsible mechanical engineer certifying compliance with applicable LORS, and shall send the CPM a copy of the transmittal letter in the next monthly compliance report.

The project owner shall transmit to the CPM, in the monthly compliance report following completion of any inspection, a copy of the transmittal letter conveying the CBO's inspection approvals.

MECH-2 For all pressure vessels installed in the plant, the project owner shall submit to the CBO and California Occupational Safety and Health Administration (Cal-OSHA), prior to operation, the code certification papers and other documents required by applicable LORS. Upon completion of the installation of any pressure vessel, the project owner shall request the appropriate CBO and/or Cal-OSHA inspection of that installation.

The project owner shall:

1. Ensure that all boilers and fired and unfired pressure vessels are designed, fabricated, and installed in accordance with the appropriate section of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, or other applicable code. Vendor certification, with identification of applicable code, shall be submitted for prefabricated vessels and tanks; and

2. Have the responsible design engineer submit a statement to the CBO that the proposed final design plans, specifications, and calculations conform to all of the requirements set forth in the appropriate ASME Boiler and Pressure Vessel Code or other applicable codes.

Verification: At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of on-site fabrication or installation of any pressure vessel, the project owner shall submit to the CBO for design review and approval, the above listed documents, including a copy of the signed and stamped engineer's certification, with a copy of the transmittal letter to the CPM.

The project owner shall transmit to the CPM, in the monthly compliance report following completion of any inspection, a copy of the transmittal letter conveying the CBO's and/or Cal-OSHA inspection approvals.

MECH-3 The project owner shall submit to the CBO for design review and approval the design plans, specifications, calculations, and quality control procedures for any heating, ventilating, air conditioning (HVAC) or refrigeration system. Packaged HVAC systems, where used, shall be identified with the appropriate manufacturer's data sheets.

The project owner shall design and install all HVAC and refrigeration systems within buildings and related structures in accordance with the CBC and other applicable codes. Upon completion of any increment of construction, the

project owner shall request the CBO's inspection and approval of that construction. The final plans, specifications and calculations shall include approved criteria, assumptions, and methods used to develop the design. In addition, the responsible mechanical engineer shall sign and stamp all plans, drawings and calculations and submit a signed statement to the CBO that the proposed final design plans, specifications and calculations conform with the applicable LORS.

Verification: At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of construction of any HVAC or refrigeration system, the project owner shall submit to the CBO the required HVAC and refrigeration calculations, plans, and specifications, including a copy of the signed and stamped statement from the responsible mechanical engineer certifying compliance with the CBC and other applicable codes, with a copy of the transmittal letter to the CPM.

ELEC-1 Prior to the start of any increment of electrical construction for all electrical equipment and systems 480 Volts or higher (see a representative list, below), with the exception of underground duct work and any physical layout drawings and drawings not related to code compliance and life safety, the project owner shall submit, for CBO design review and approval, the proposed final design, specifications, and calculations. Upon approval, the above listed plans, together with design changes and design change notices, shall remain on the site or at another accessible location for the operating life of the project. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. All transmission facilities (lines, switchyards, switching stations, and substations) are handled in conditions of certification in the **TRANSMISSION SYSTEM ENGINEERING** section of this document.

A. Final plant design plans shall include:

1. one-line diagrams for the 13.8 kV, 4.16 kV and 480 V systems; and

2. system grounding drawings.

B. Final plant calculations must establish:

1. short-circuit ratings of plant equipment;

2. ampacity of feeder cables;

3. voltage drop in feeder cables;

4. system grounding requirements;

5. coordination study calculations for fuses, circuit breakers and protective relay settings for the 13.8 kV, 4.16 kV and 480 V systems;

6. system grounding requirements; and

7. lighting energy calculations.

C. The following activities shall be reported to the CPM in the monthly compliance report:

1. Receipt or delay of major electrical equipment;

2. Testing or energization of major electrical equipment; and

3. A signed statement by the registered electrical engineer certifying that the proposed final design plans and specifications conform to requirements set forth in the Energy Commission decision.

Verification: At least 30 days (or project owner- and CBO-approved alternative time frame) prior to the start of each increment of electrical construction, the project owner shall submit to the CBO for design review and approval the above listed documents. The project owner shall include in this submittal a copy of the signed and stamped statement from the responsible electrical engineer attesting compliance with the applicable LORS, and shall send the CPM a copy of the transmittal letter in the next monthly compliance report.

TSE-1 The project owner shall furnish to the Compliance Project Manager (CPM) and to the Chief Building Official (CBO) a schedule of transmission facility design submittals, a Master Drawing List, a Master Specifications List, and a Major Equipment and Structure List. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment. To facilitate audits by Energy Commission staff, the project owner shall provide designated packages to the CPM when requested.

Verification: At least 60 days prior to the start of construction (or a lesser number of days mutually agreed to by the project owner and the CBO), the project owner shall submit the schedule, a Master Drawing List, and a Master Specifications List to the CBO and to the CPM. The schedule shall contain a description and list of proposed submittal packages for design, calculations, and specifications for major structures and equipment (see a list of major equipment in **Transmission System Engineering Table 1,** Major Equipment List below). Additions and deletions shall be made to the table only with CPM and CBO approval. The project owner shall provide schedule updates in the Monthly Compliance Report.

Transmission System Engineering Table 1
Major Equipment List

Breakers Step-Up Transformer Switchyard Busses Surge Arrestors	Take Off Facilities Electrical Control Building Switchyard Control Building Transmission Pole/Tower Grounding System
Disconnects	

TSE-2 Prior to the start of construction, the project owner shall assign an electrical engineer and at least one of each of the following to the project: A) a civil engineer; B) a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering; C) a design engineer who is either a structural engineer or a civil engineer fully competent and proficient in the design of power plant structures and equipment supports; or D) a mechanical engineer. (Business and Professions Code Sections 6704 et seq. require state registration to practice as a civil engineer or structural engineer in California).

The tasks performed by the civil, mechanical, electrical, or design engineers may be divided between two or more engineers, as long as each engineer is responsible for a particular segment of the project (e.g., proposed earthwork, civil structures, power plant structures, equipment support). No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California-registered electrical engineer. The civil, geotechnical or civil, and design engineer assigned in

conformance with Facility Design condition GEN-5, may be responsible for design and review of the TSE facilities.

The project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all engineers assigned to the project. If any one of the designated engineers is subsequently reassigned or replaced, the project owner shall submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval.

The project owner shall notify the CPM of the CBO's approval of the new engineer. This engineer shall be authorized to halt earthwork and to require changes if site conditions are unsafe or do not conform to predicted conditions used as a basis for design of earthwork or foundations.

The electrical engineer shall:

1. Be responsible for the electrical design of the power plant switchyard, outlet and termination facilities; and

2. Sign and stamp electrical design drawings, plans, specifications, and calculations.

Verification: At least 30 days prior to the start of rough grading (or a lesser number of days mutually agreed to by the project owner and the CBO), the project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the engineers within 5 days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner shall have 5 days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within 5 days of that approval.

TSE-3 If any discrepancy in design and/or construction is discovered in any engineering work that has previously undergone CBO design review and approval, the project owner shall document the discrepancy and recommend corrective action (California Building Code, 1998, Chapter 1, Section 108.4, Approval Required; Chapter 17, Section 1701.3, Duties and Responsibilities of the Special Inspector; Appendix Chapter 33, Section 3317.7, Notification of Noncompliance). The discrepancy documentation shall become a controlled document and shall be submitted to the CBO for review and approval and shall reference this condition of certification.

Verification: The project owner shall submit a copy of the CBO's approval or disapproval of any corrective action taken to resolve a discrepancy to the CPM within 15 days of receipt. If disapproved, the project owner shall advise the CPM, within 5 days, the reason for disapproval, and the revised corrective action required obtaining the CBO's approval.

TSE-4 For the power plant switchyard, outlet line, and termination, the project owner shall not begin any increment of construction until plans for that increment have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. The following activities shall be reported in the Monthly Compliance Report:

1. Receipt or delay of major electrical equipment;

2. Testing or energization of major electrical equipment; and

3. The number of electrical drawings approved, submitted for approval, and still to be submitted.

Verification: At least 30 days prior to the start of each increment of construction (or a lesser number of days mutually agreed to by the project owner and the CBO), the project owner shall submit to the CBO for review and approval the final design plans, specifications, and calculations for equipment and systems of the power plant switchyard, outlet line, and termination, including a copy of the signed and stamped statement from the responsible electrical engineer attesting to compliance with the applicable LORS, and shall include a copy of the transmittal letter in the next Monthly Compliance Report.

TSE-5 The project owner shall ensure that the design, construction, and operation of the proposed transmission facilities conform to all applicable LORS, including the requirements listed below. The project owner shall submit the required number of copies of the design drawings and calculations as determined by the CBO.

1. The Calico Solar Project shall be interconnected to the SCE grid via a segment of 230 kV, 1590 kcmil-ACSR, approximately 2 mile long single circuit extending from the new substation on the project site to the Pisgah SCE Substation.

2. The Calico Solar Project substation on the project site shall use 34.5 kV, 1200A, 25 breakers and six, three phase, 100/133/167.7 MVA, 34.5 kV/230 kV transformers.

3. The power plant outlet line shall meet or exceed the electrical, mechanical, civil, and structural requirements of CPUC General Order 95 and General Order 98 or National Electric Safety Code (NESC), Title 8 of the California Code and Regulations (Title 8), Articles 35, 36, and 37 of the "High Voltage Electric Safety Orders", California ISO standards, National Electric Code (NEC), and related industry standards.

4. Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with a short-circuit analysis.

5. Outlet line crossings and line parallels with transmission and distribution facilities shall be coordinated with the transmission line owner and comply with that owner's standards.

6. The project conductors shall be sized to accommodate the full output from the project.

7. Termination facilities shall comply with applicable SCE interconnection standards.

8. The generating facility shall provide sufficient reactive power resources on the project site as specified by the power factor design criteria requirements in Large Generator Interconnection Agreement.

Verification: At least ~~60~~<30> days prior to the start of construction of transmission facilities (or a lesser number of days mutually agreed to by the project owner and CBO), the project owner shall submit to the CBO for approval:

1. Design drawings, specifications, and calculations conforming with CPUC General Order 95 and General Order 98 or NESC; Title 8, California Code of Regulations, Articles 35, 36, and 37 of the "High Voltage Electric Safety Orders"; NEC; applicable interconnection standards, and related industry standards for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment.

2. For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on worst-case conditions,[1] and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or NESC; Title 8, California Code of Regulations, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders"; NEC; applicable interconnection standards, and related industry standards.

3. Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in responsible charge, a route map, and an engineering

description of equipment and the configurations covered by requirements **TSE-1 through 5** above.

TSE-6 The project owner shall provide the following Notice to the California Independent System Operator (California ISO) prior to synchronizing the facility with the California transmission system:

1. At least one week prior to synchronizing the facility with the grid for testing, provide the California ISO a letter stating the proposed date of synchronization; and

2. At least one business day prior to synchronizing the facility with the grid for testing, provide telephone notification to the California ISO Outage Coordination Department.

Verification: The project owner shall provide copies of the California ISO letter to the CPM when it is sent to the California ISO one week prior to initial synchronization with the grid. A report of the conversation with the California ISO shall be provided electronically to the CPM one day before synchronizing the facility with the California transmission system for the first time.

TSE-7 The project owner shall be responsible for the inspection of the transmission facilities during and after project construction, and any subsequent CPM and CBO approved changes thereto, to ensure conformance with CPUC GO-95 or NESC; Title 8, CCR, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders"; applicable interconnection standards; NEC; and related industry standards. In case of non-conformance, the project owner shall inform the CPM and CBO in writing, within 10 days of discovering such non-conformance and describe the corrective actions to be taken.

Verification: Within 60 days after first synchronization of the project, the project owner shall transmit to the CPM and CBO:

1. As-built engineering description(s) and one-line drawings of the electrical portion of the facilities signed and sealed by the registered electrical engineer in responsible charge. A statement attesting to conformance with CPUC GO-95 or NESC; Title 8, California Code of Regulations, Articles 35, 36 and 37 of the "High Voltage Electric Safety Orders"; applicable interconnection standards; NEC; and related industry standards, and these conditions shall be provided concurrently with the submittal of the as-built plans.

2. An as-built engineering description of the mechanical, structural, and civil portions of the transmission facilities signed and sealed by the registered engineer in responsible charge or acceptable alternative verification. As-built drawings of the electrical, mechanical, structural, and civil portions of the transmission facilities shall be maintained at the power plant and made available, if requested, for CPM audit as set forth in the "Compliance Monitoring Plan."

3. A summary of inspections of the completed transmission facilities, and identification of any nonconforming work and corrective actions taken, signed and sealed by the registered engineer in charge.

UNRESTRICTED ACCESS (COMPLIANCE-1)

The CPM, responsible Energy Commission staff, and delegated agencies or consultants shall be guaranteed and granted unrestricted access to the power plant site, related facilities, project-related staff, and the records maintained on-site for the purpose of conducting audits, surveys, inspections, or general site visits. Although the CPM will normally schedule site visits on dates and times agreeable to the project owner, the CPM reserves the right to make unannounced visits at any time.

COMPLIANCE RECORD (COMPLIANCE-2)

The project owner shall maintain project files on-site or at an alternative site approved by the CPM for the life of the project, unless a lesser period of time is specified by the conditions of certification. The files shall contain copies of all “as-built” drawings, documents submitted as verification for conditions, and other project-related documents.

Energy Commission staff and delegate agencies shall, upon request to the project owner, be given unrestricted access to the files maintained pursuant to this condition.

COMPLIANCE VERIFICATION SUBMITTALS (COMPLIANCE-3)

Each condition of certification is followed by a means of verification. The verification describes the Energy Commission’s procedure(s) to ensure post-certification compliance with adopted conditions. The verification procedures, unlike the conditions, may be modified as necessary by the CPM.

Verification of compliance with the conditions of certification can be accomplished by the following:

1. monthly and/or annual compliance reports, filed by the project owner or authorized agent, reporting on work done and providing pertinent documentation, as required by the specific conditions of certification;
2. appropriate letters from delegate agencies verifying compliance;
3. energy Commission staff audits of project records; and/or
4. energy Commission staff inspections of work, or other evidence that the requirements are satisfied.

Verification lead times associated with start of construction may require the project owner to file submittals during the certification process, particularly if construction is planned to commence shortly after certification.

A cover letter from the project owner or authorized agent is required for all compliance submittals and correspondence pertaining to compliance matters. **The cover letter subject line shall identify the project by AFC number, the appropriate condition(s) of certification by condition number(s), and a brief description of the subject of**

the submittal. The project owner shall also identify those submittals **not** required by a condition of certification with a statement such as: “This submittal is for information only and is not required by a specific condition of certification.” When submitting supplementary or corrected information, the project owner shall reference the date of the previous submittal and CEC submittal number.

The project owner is responsible for the delivery and content of all verification submittals to the CPM, whether such condition was satisfied by work performed by the project owner or an agent of the project owner. All hardcopy submittals shall be addressed as follows:

Mary Dyas

Compliance Project Manager
08-AFC-13C

California Energy Commission
1516 Ninth Street (MS-2000)
Sacramento, CA 95814

Those submittals shall be accompanied by a searchable electronic copy, on a CD or by e-mail, as agreed upon by the CPM.

If the project owner desires Energy Commission staff action by a specific date, that request shall be made in the submittal cover letter and shall include a detailed explanation of the effects on the project if that date is not met.

PRE-CONSTRUCTION MATRIX AND TASKS PRIOR TO START OF CONSTRUCTION (COMPLIANCE-4)

Prior to commencing construction, a compliance matrix addressing only those conditions that must be fulfilled before the start of construction shall be submitted by the project owner to the CPM. This matrix will be included with the project owner’s first compliance submittal or prior to the first pre-construction meeting, whichever comes first. It will be submitted in the same format as the compliance matrix described below.

Construction shall not commence until the pre-construction matrix is submitted, all pre-construction conditions have been complied with, and the CPM has issued a letter to the project owner authorizing construction. Various lead times for submittal of compliance verification documents to the CPM for conditions of certification are established to allow sufficient staff time to review and comment and, if necessary, allow the project owner to revise the submittal in a timely manner. This will ensure that project construction may proceed according to schedule.

Failure to submit compliance documents within the specified lead-time may result in delays in authorization to commence various stages of project development.

If the project owner anticipates commencing project construction as soon as the project is certified, it may be necessary for the project owner to file compliance submittals prior to project certification. Compliance submittals should be completed in advance where the necessary lead time for a required compliance event extends beyond the date anticipated for start of construction. The project owner must understand that the submittal of compliance documents prior to project certification is at the owner's own risk. Any approval by Energy Commission staff is subject to change, based upon the Commission Decision.

Compliance Reporting

There are two different compliance reports that the project owner must submit to assist the CPM in tracking activities and monitoring compliance with the terms and conditions of the Energy Commission Decision. During construction, the project owner or authorized agent will submit Monthly Compliance Reports. During operation, an Annual Compliance Report must be submitted. These reports, and the requirement for an accompanying compliance matrix, are described below. The majority of the conditions of certification require that compliance submittals be submitted to the CPM in the monthly or annual compliance reports.

COMPLIANCE MATRIX (COMPLIANCE-5)

A compliance matrix shall be submitted by the project owner to the CPM along with each monthly and annual compliance report. The compliance matrix is intended to provide the CPM with the current status of all conditions of certification in a spreadsheet format. The compliance matrix must identify:

1. the technical area;

2. the condition number;

3. a brief description of the verification action or submittal required by the condition;

4. the date the submittal is required (e.g., 60 days prior to construction, after final inspection, etc.);

5. the expected or actual submittal date;

6. the date a submittal or action was approved by the Chief Building Official (CBO), CPM, or delegate agency, if applicable;

7. the compliance status of each condition, e.g., “not started,” “in progress” or “completed” (include the date); and

8. if the condition was amended, the date of the amendment.

Satisfied conditions shall be placed at the end of the matrix.

MONTHLY COMPLIANCE REPORT (COMPLIANCE-6)

The first Monthly Compliance Report is due one month following the Energy Commission business meeting date upon which the project was approved, unless otherwise agreed to by the CPM. The first Monthly Compliance Report shall include the AFC number and an initial list of dates for each of the events identified on the **Key Events List. The Key Events List form is found at the end of these General Conditions.**

During pre-construction and construction of the project, the project owner or authorized agent shall submit an original and an electronic searchable version of the Monthly Compliance Report within 10 working days after the end of each reporting month. Monthly Compliance Reports shall be clearly identified for the month being reported. The reports shall contain, at a minimum:

1. a summary of the current project construction status, a revised/updated schedule if there are significant delays, and an explanation of any significant changes to the schedule;

2. documents required by specific conditions to be submitted along with the Monthly Compliance Report. Each of these items must be identified in the transmittal letter, as well as the conditions they satisfy and submitted as attachments to the Monthly Compliance Report;

3. an initial, and thereafter updated, compliance matrix showing the status of all conditions of certification;

4. a list of conditions that have been satisfied during the reporting period, and a description or reference to the actions that satisfied the condition;

5. a list of any submittal deadlines that were missed, accompanied by an explanation and an estimate of when the information will be provided;

6. a cumulative listing of any approved changes to conditions of certification;

7. a listing of any filings submitted to, or permits issued by, other governmental agencies during the month;

8. a projection of project compliance activities scheduled during the next two months. The project owner shall notify the CPM as soon as any changes are made to the project construction schedule that would affect compliance with conditions of certification;

9. a listing of the month's additions to the on-site compliance file; and

10. a listing of complaints, notices of violation, official warnings, and citations received during the month, a description of the resolution of the resolved actions, and the status of any unresolved actions.

All sections, exhibits, or addendums shall be separated by tabbed dividers or as acceptable by the CPM.

ANNUAL COMPLIANCE REPORT (COMPLIANCE-7)

After construction is complete, the project owner shall submit Annual Compliance Reports instead of Monthly Compliance Reports. The reports are for each year of commercial operation and are due to the CPM each year at a date agreed to by the CPM. Annual Compliance Reports shall be submitted over the life of the project, unless otherwise specified by the CPM. Each Annual Compliance Report shall include the AFC number, identify the reporting period, and shall contain the following:

1. an updated compliance matrix showing the status of all conditions of certification (fully satisfied conditions do not need to be included in the matrix after they have been reported as completed);

2. a summary of the current project operating status and an explanation of any significant changes to facility operations during the year;

3. documents required by specific conditions to be submitted along with the Annual Compliance Report. Each of these items must be identified in the transmittal letter with the condition it satisfies, and submitted as attachments to the Annual Compliance Report;

4. a cumulative listing of all post-certification changes approved by the Energy Commission or cleared by the CPM;

5. an explanation for any submittal deadlines that were missed, accompanied by an estimate of when the information will be provided;

6. a listing of filings submitted to, or permits issued by, other governmental agencies during the year;

7. a projection of project compliance activities scheduled during the next year;

8. a listing of the year's additions to the on-site compliance file;

9. an evaluation of the on-site contingency plan for unplanned facility closure, including any suggestions necessary for bringing the plan up to date (see Compliance Conditions for Facility Closure addressed later in this section); and

10. a listing of complaints, notices of violation, official warnings, and citations received during the year, a description of the resolution of any resolved matters, and the status of any unresolved matters.

CONFIDENTIAL INFORMATION (COMPLIANCE-8)

Any information that the project owner deems confidential shall be submitted to the Energy Commission's Executive Director with an application for confidentiality pursuant to Title 20, California Code of Regulations, section 2505(a). Any information that is determined to be confidential shall be kept confidential as provided for in Title 20, California Code of Regulations, section 2501, et. seq.

REPORTING OF COMPLAINTS, NOTICES, AND CITATIONS (COMPLIANCE-9)

Prior to the start of construction, the project owner must send a letter to property owners living within one mile of the project notifying them of a telephone number to contact project representatives with questions, complaints, or concerns. If the telephone is not staffed 24 hours per day, it shall include automatic answering with a date and time

stamp recording. All recorded complaints shall be responded to within 24 hours. The telephone number shall be posted at the project site and made easily visible to passersby during construction and operation. The telephone number shall be provided to the CPM who will post it on the Energy Commission's web page at http://www.energy.ca.gov/sitingcases/power_plants_contacts.html.

Any changes to the telephone number shall be submitted immediately to the CPM, who will update the web page.

In addition to the monthly and annual compliance reporting requirements described above, the project owner shall report and provide copies to the CPM of all complaint forms, including noise and lighting complaints, notices of violation, notices of fines, official warnings, and citations within 10 days of receipt. Complaints shall be logged and numbered. Noise complaints shall be recorded on the form provided in the **NOISE** conditions of certification. All other complaints shall be recorded on the complaint form (Attachment A).

PLANNED CLOSURE (COMPLIANCE-10)

In order to ensure that a planned facility closure does not create adverse impacts, a closure process that provides for careful consideration of available options and applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of closure will be undertaken. To ensure adequate review of a planned project closure, the project owner shall submit a proposed facility closure plan to the Energy Commission for review and approval at least 12 months (or other period of time agreed to by the CPM) prior to the commencement of closure activities. The project owner shall file 120 copies (or other number of copies agreed upon by the CPM) of a proposed facility closure plan with the Energy Commission.

The plan shall:

1. identify and discuss any impacts and mitigation to address significant adverse impacts associated with proposed closure activities and to address facilities, equipment, or other project related remnants that will remain at the site;
2. identify a schedule of activities for closure of the power plant site, transmission line corridor, and all other appurtenant facilities constructed as part of the project;
3. identify any facilities or equipment intended to remain on site after closure, the reason, and any future use; and
4. address conformance of the plan with all applicable laws, ordinances, regulations, standards, and local/regional plans in existence at the time of facility closure, and applicable conditions of certification.

Prior to submittal of the proposed facility closure plan, a meeting shall be held between the project owner and the Energy Commission CPM for the purpose of discussing the specific contents of the plan.

In the event that there are significant issues associated with the proposed facility closure plan's approval, or if the desires of local officials or interested parties are inconsistent with the plan, the CPM shall hold one or more workshops and/or the Energy Commission may hold public hearings as part of its approval procedure.

As necessary, prior to or during the closure plan process, the project owner shall take appropriate steps to eliminate any immediate threats to public health and safety and the environment, but shall not commence any other closure activities until the Energy Commission approves the facility closure plan.

UNPLANNED TEMPORARY CLOSURE/ON-SITE CONTINGENCY PLAN (COMPLIANCE-11)

In order to ensure that public health and safety and the environment are protected in the event of an unplanned temporary facility closure, it is essential to have an on-site contingency plan in place. The on-site contingency plan will help to ensure that all necessary steps to mitigate public health and safety impacts and environmental impacts are taken in a timely manner.

The project owner shall submit an on-site contingency plan for CPM review and approval. The plan shall be submitted no less than 60 days (or other time agreed to by the CPM) prior to commencement of commercial operation. The approved plan must be in place prior to commercial operation of the facility and shall be kept at the site at all times.

The project owner, in consultation with the CPM, will update the on-site contingency plan as necessary. The CPM may require revisions to the on-site contingency plan over the life of the project. In the annual compliance reports submitted to the Energy Commission, the project owner will review the on-site contingency plan, and recommend changes to bring the plan up to date. Any changes to the plan must be approved by the CPM.

The on-site contingency plan shall provide for taking immediate steps to secure the facility from trespassing or encroachment. In addition, for closures of more than 90 days, unless other arrangements are agreed to by the CPM, the plan shall provide for removal of hazardous materials and hazardous wastes, draining of all chemicals from storage tanks and other equipment, and the safe shutdown of all equipment. (Also see specific conditions of certification for the technical areas of **Hazardous Materials Management** and **Waste Management)**

In addition, consistent with requirements under unplanned permanent closure addressed below, the nature and extent of insurance coverage, and major equipment warranties must also be included in the on-site contingency plan. In addition, the status of the insurance coverage and major equipment warranties must be updated in the annual compliance reports.

In the event of an unplanned temporary closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail, within 24 hours and shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the circumstances and expected duration of the closure.

If the CPM determines that an unplanned temporary closure is likely to be permanent, or for a duration of more than 12 months, a closure plan consistent with the requirements for a planned closure shall be developed and submitted to the CPM within 90 days of the CPM's determination (or other period of time agreed to by the CPM).

UNPLANNED PERMANENT CLOSURE/ON-SITE CONTINGENCY PLAN (COMPLIANCE-12)

The on-site contingency plan required for unplanned temporary closure shall also cover unplanned permanent facility closure. All of the requirements specified for unplanned temporary closure shall also apply to unplanned permanent closure.

In addition, the on-site contingency plan shall address how the project owner will ensure that all required closure steps will be successfully undertaken in the event of abandonment.

In the event of an unplanned permanent closure, the project owner shall notify the CPM, as well as other responsible agencies, by telephone, fax, or e-mail within 24 hours and shall take all necessary steps to implement the on-site contingency plan. The project owner shall keep the CPM informed of the status of all closure activities.

A closure plan, consistent with the requirements for a planned closure, shall be developed and submitted to the CPM within 90 days of the permanent closure or another period of time agreed to by the CPM.

POST CERTIFICATION CHANGES TO BLM'S ROW GRANT AND/OR THE ENERGY COMMISSION DECISION: AMENDMENTS, OWNERSHIP CHANGES, STAFF APPROVED PROJECT MODIFICATIONS AND VERIFICATION CHANGES (COMPLIANCE-13)

The project owner must petition the Energy Commission pursuant to Title 20, California Code of Regulations, section 1769, in order to modify the project (including linear facilities) design, operation or performance requirements, and to transfer ownership or operational control of the facility. **It is the responsibility of the project owner to contact the CPM to determine if a proposed project change should be considered a project modification pursuant to section 1769.** Implementation of a project modification without first securing Energy Commission, or Energy Commission staff approval, may result in enforcement action that could result in civil penalties in accordance with section 25534 of the Public Resources Code.

A petition is required for **amendments** and for **staff approved project modifications** as specified below. Both shall be filed as a "Petition to Amend." Staff will determine if

the change is significant or insignificant. For verification changes, a letter from the project owner is sufficient. In all cases, the petition or letter requesting a change should be submitted to the CPM, who will file it with the Energy Commission's Dockets Unit in accordance with Title 20, California Code of Regulations, section 1209.

The criteria that determine which type of approval and the process that applies are explained below. They reflect the provisions of Section 1769 at the time this condition was drafted. If the Commission's rules regarding amendments are amended, the rules in effect at the time an amendment is requested shall apply.

AMENDMENT

The project owner shall petition the Energy Commission, pursuant to Title 20, California Code of Regulations, Section 1769(a), when proposing modifications to the project (including linear facilities) design, operation, or performance requirements. If a proposed modification results in deletion or change of a condition of certification, or makes changes that would cause the project not to comply with any applicable laws, ordinances, regulations, or standards the petition will be processed as a formal amendment to the final decision, which requires public notice and review of the Energy Commission staff analysis and approval by the full Commission. The petition shall be in the form of a legal brief and fulfill the requirements of Section 1769(a). Upon request, the CPM will provide a sample petition to use as a template.

DECLARATION OF PATRICK J. MOCK, PhD

This Page Intentionally Left Blank

DECLARATION OF PATRICK J. MOCK, PhD

I, Patrick J. Mock, declare:

1. I am employed by URS Corporation as a Principal Scientist. I have participated in and managed the analysis of biological resources on behalf of Calico Solar, LLC for the Calico Solar Project. I have personal knowledge of the matters stated in this Declaration and if called as a witness I could and would competently testify thereto.

2. Attached to this Declaration is a table that I helped to prepare. The table shows that if the same methodology is applied to the Ivanpah Solar Project as has been applied to the Calico Solar Project, the Ivanpah project causes direct effects on a greater density of tortoises per acre than the Calico project. The density on the Calico project site is 0.0912 adult/sub-adult and juvenile tortoises per acre, and using the same methodology, the Ivanpah project has 0.0994 tortoises per acre directly affected. I have reviewed the environmental documentation for the Ivanpah project, which shows that the desert tortoise analysis for that project involved simply counting the number of tortoises found (25) and requiring mitigation for those 25 tortoises. No assumptions regarding additional, untallied tortoises were used to set mitigation requirements for that project in the documentation I reviewed. The Ivanpah tortoise surveys were also conducted during drought years, while the Calico surveys were done during a good rainfall year. Rainfall greatly influences the number of tortoise detected during surveys.

.3. I have extensive experience in long term management of habitat lands for the benefit of special status species and am generally familiar with the costs associated with such management. I have reviewed CEC Staff's estimate of $1,450 per acre as the cost of long term management of Desert Tortoise habitat. This estimate is unrealistically high, given that the habitat managed for the tortoise is required to be high quality. The Applicant's estimate of $692 per acre as the cost

of long term management is reasonable and in line with what I would expect a PAR or PAR-like analysis to show.

I declare under penalty of perjury that the foregoing is true and correct and that this Declaration was executed at San Diego, California on August 23, 2010.

_____

Patrick J. Mock, PhD

ATTACHMENT A

PATRICK J. MOCK BRIEF

This Page Intentionally Left Blank

Ivanpah Direct Effects With Calico Solar Comparison				
Project Feature	Adult/Sub-adult (Min-Max)*[1]	Juveniles (Min-Max)*	Eggs*	Total Adult/Sub-Adult and Juvenile
Project Site	66 (23-189)	69 (30-69)	306.24	135 (53-258)
Translocation Area	66 (23-189)	69 (30-69)	N/A	135 (53-258)
Control Area	66 (23-189)	69 (30-69)	N/A	135 (53-258)
TOTAL	198 (69-567)	207 (90-207)	N/A	405 (159-774)
Ivanpah TOTAL Per Acre**	**0.0486** (0.0169-0.1392)	**0.0508** (0.0221-0.0508)	N/A	**0.0994** (0.0390-0.1900)
Calico Solar TOTAL Per Acre*	**0.0449** (0.0227-0.0893)	**0.0463** (0.0302-0.0463)	N/A	**0.0912** (0.0425-0.1356)
*Same assumptions/methods used to create the Calico Solar Biological Resources Table 6a from Staff's Second Errata to the SSA				
** Assumed 4073 Acres per Ivanpah PMPD				
1. Estimation derived using USFWS formula. However, since some formula inputs were not readily available for the Ivanpah project, assumptions were made and have been noted on the following sheet				

This Page Intentionally Left Blank

DECLARATION OF THERESA MILLER

This Page Intentionally Left Blank

DECLARATION OF THERESA MILLER

I, Theresa Miller, declare:

1. I am employed by URS Corporation as a Senior Biologist. I participated in the analysis of desert tortoise impacts and in the preparation of the Desert Tortoise Translocation Plan for the Calico Solar Project. I have personal knowledge of the matters stated in this Declaration and if called as a witness I could and would competently testify thereto.

2. On approximately August 17, 2010, the Committee asked a series of questions regarding the Desert Tortoise Translocation Plan and related issues. At the August 18, 2010 hearing, this topic was discussed in a panel format and the committee requested that all participants provide answers to the questions as part of the briefs that would be provided to the Committee. Accordingly, the following are my answers to the Committee's questions. The Committee's questions are in italics and my responses are in plain text.

3. *How many tortoises are estimated to exist (rough estimates of individuals) and how many population centers or major groups exist?* Surveys conducted in 2005-2007 in the planning area of the West Mojave Plan (WEMO or WMP) by the USFWS show that tortoise are unevenly distributed throughout the range and that there are approximately 45,000 in the WEMO action area: 39,000 within Critical Habitat (CH) and 6,000 outside of Critical Habitat and the Desert Wildlife Management Areas (DWMA). Furthermore, based on the same surveys, the estimated density in the western Mojave Recovery Unit may be approximately 125,855 tortoise (USFWS 2009).

4. *What constitutes a population center or major group?* DWMAs and CH are identified as areas where tortoise densities are high and therefore would be one description of a population center.

5. *What is the approximate total acreage of prime tortoise habitat (occupied and also that which could be occupied)?* The acreage of critical habitat and DWMA in the WEMO is 2,400 square miles (1,536,000 acres). The Project site is not located within BLM Categories I-III, which provide guidelines that define the value and levels of protection for tortoise habitat within lands managed by BLM.

6. *What is the approximate acreage of non-prime and marginal lands that could provide habitat for tortoise?* These lands total approximately 4,600 square miles (2,944,000 acres) outside of DWMA lands and CH within the WEMO.

7. *What are the main reasons for listing the desert tortoise?* Loss of habitat due to human use and development, disease, and predation.

8. *What is the status of the species since listing (i.e., has the population increased or decreased)?* Based on long-term studies, the tortoise population is generally decreasing.

9. *Since listing, how many take permits have been issued and what have been the effects of mitigation to minimize impacts?* Consultation is required for potential take of habitat, and can be required whether or not a tortoise could be taken, so it is difficult measure the number of permits and takes of tortoise. The agencies would be more able to answer this since take permits are provided through individual applications by project proponents. Mitigation would occur for any lost habitat, which would offset the loss of habitat or take of tortoise.

10. *What is the range of population density per acre?* Distribution of desert tortoise is patchy throughout the range and is locally variable, and it should be noted that population size and density is assessed differently across many projects/surveys. However, population density has been observed at an average of 12.2 adults/subadults per square mile in the western Recovery Unit (FWS 2009), and, has been estimated at 0-28 per square kilometer with a mean of 8.2/km^2 in a recent project-specific study (Karl 2010).

11. *How does this project's site compare?* The density of the original, larger 8,230 acre Project site was estimated approximately 5.29 adult/subadult tortoises per square kilometer (URS 2010). The density of the currently proposed 6,215 acre Project site is estimated at 3.7 adults/subadults per square kilometer.

12. *What is the maximum carrying capacity per acre for prime habitat, non-prime and marginal lands?* The maximum carrying capacity is variable and specific to each habitat location and difficult to assess across a large landscape.

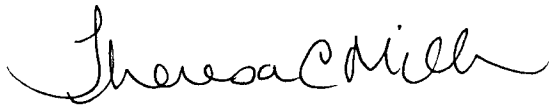
13. *What is the range of the desert tortoise?* The range of the Mojave population of the desert tortoise is in the Mojave and Sonoran Deserts in southern Utah, southeastern California, Nevada and northern Arizona.

14. *What importance does this site play in that range?* The Project site is located between the Western Mojave Desert and the Eastern Mojave Desert. The Project impacts are consistent with the West Mojave Plan and the associated analysis in the EIS and the Biological Opinion.

15.. *What is the value of this site relative to other sites of BLM and non-BLM managed lands?* The site it is surrounded by critical habitat, DWMAs, Areas of Critical

Environmental Concern (ACECs), Wilderness Study Areas (WSAs), and other special status habitat areas. The Project site is not located within any of these special habitat areas, was not located within BLM Category I, II or III designations that guide the management of desert tortoise habitat within public lands, and does not support the same density of tortoise as the surrounding public lands. Therefore, it does not hold the same level of value as the surrounding BLM and non-BLM managed lands in the region.

I declare under penalty of perjury that the foregoing is true and correct and that this Declaration was executed at San Diego, California on August 23, 2010.



Theresa Miller

References:

Karl, A. 2010. Ridgecrest Solar Power Project Analysis of Population and Species Impacts to the Desert Tortoise.

URS. 2010. Supplemental biological assessment for the Calico Solar Project, San Bernardino County, California. Prepared for U.S. Fish and Wildlife Service and Bureau of Land Management, Barstow Field Office, Barstow, California. San Diego, California.

U.S. Fish and Wildlife Service. 2009. Range-wide monitoring of the Mojave population of the desert tortoise: 2007 annual report. Desert Tortoise Recovery Office. Reno, Nevada.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION

***For the CALICO SOLAR** (Formerly SES Solar One)*

Docket No. 08-AFC-13

PROOF OF SERVICE
(Revised 8/9/10)

APPLICANT
Felicia Bellows
Vice President of Development
& Project Manager
Tessera Solar
4800 North Scottsdale Road,
#5500
Scottsdale, AZ 85251
felicia.bellows@tesserasolar.com

CONSULTANT
Angela Leiba
AFC Project Manager
URS Corporation
1615 Murray Canyon Rd.,
#1000
San Diego, CA 92108
angela_leiba@URSCorp.com

APPLICANT'S COUNSEL
Allan J. Thompson
Attorney at Law
21 C Orinda Way #314
Orinda, CA 94563
allanori@comcast.net

Ella Foley Gannon, Partner
Bingham McCutchen, LLP
Three Embarcadero Center
San Francisco, CA 94111
ella.gannon@bingham.com

INTERESTED AGENCIES
California ISO
e-recipient@caiso.com

Jim Stobaugh
BLM – Nevada State Office
P.O. Box 12000
Reno, NV 89520
jim_stobaugh@blm.gov

Rich Rotte, Project Manager
Bureau of Land Management
Barstow Field Office
2601 Barstow Road
Barstow, CA 92311
richard_rotte@blm.gov

Becky Jones
California Department of
Fish & Game
36431 41st Street East
Palmdale, CA 93552
dfgpalm@adelphia.net

INTERVENORS
County of San Bernardino
Ruth E. Stringer,
County Counsel
Bart W. Brizzee,
Deputy County Counsel
385 N. Arrowhead Avenue,
4th Floor
San Bernardino, CA 92415-
bbrizzee@cc.sbcounty.gov

California Unions for Reliable
Energy (CURE)
c/o: Loulena A. Miles,
Marc D. Joseph
Adams Broadwell Joseph
& Cardozo
601 Gateway Boulevard, Ste. 1000
South San Francisco, CA 94080
lmiles@adamsbroadwell.com

Defenders of Wildlife
Joshua Basofin
1303 J Street, Suite 270
Sacramento, California 95814
e-mail service preferred
jbasofin@defenders.org

Society for the Conservation of
Bighorn Sheep
Bob Burke & Gary Thomas
P.O. Box 1407
Yermo, CA 92398
cameracoordinator@sheepsociety.com

Basin and Range Watch
Laura Cunningham &
Kevin Emmerich
P.O. Box 70
Beatty, NV 89003
atomictoadranch@netzero.net

*indicates change

INTERVENORS CONT.

Patrick C. Jackson
600 N. Darwood Avenue
San Dimas, CA 91773
e-mail service preferred
ochsjack@earthlink.net

Gloria D. Smith, Senior Attorney
*Travis Ritchie
Sierra Club
85 Second Street, Second floor
San Francisco, CA 94105
gloria.smith@sierraclub.org
travis.ritchie@sierraclub.org

Newberry Community
Service District
Wayne W. Weierbach
P.O. Box 206
Newberry Springs, CA 92365
newberryCSD@gmail.com

Cynthia Lea Burch
Steven A. Lamb
Anne Alexander
Katten Muchin Rosenman LLP
2029 Century Park East,
Ste. 2700
Los Angeles, CA 90067-3012
Cynthia.burch@kattenlaw.com
Steven.lamb@kattenlaw.com
Anne.alexander@kattenlaw.com

ENERGY COMMISSION

ANTHONY EGGERT
Commissioner and Presiding Member
aeggert@energy.state.ca.us

JEFFREY D. BYRON
Commissioner and Associate Member
jbyron@energy.state.ca.us

Paul Kramer
Hearing Officer
pkramer@energy.state.ca.us

Lorraine White, Adviser to
Commissioner Eggert
e-mail service preferred
lwhite@energy.state.ca.us

Kristy Chew, Adviser to
Commissioner Byron
e-mail service preferred
kchew@energy.state.ca.us

Caryn Holmes
Staff Counsel
cholmes@energy.state.ca.us

Steve Adams
Co-Staff Counsel
sadams@energy.state.ca.us

Christopher Meyer
Project Manager
cmeyer@energy.state.ca.us

Jennifer Jennings
Public Adviser
e-mail service preferred
publicadviser@energy.state.ca.us

*indicates change

DECLARATION OF SERVICE

I, Darin Neufeld, declare that on August 23, 2010, I served and filed copies of the attached Applicant's Submittal of Post-Hearing Brief. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/solarone].

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(*Check all that Apply*)

FOR SERVICE TO ALL OTHER PARTIES:

__X__ sent electronically to all email addresses on the Proof of Service list;

____ by personal delivery;

__X__ by delivering on this date, for mailing with the United States Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses NOT marked "email preferred."

AND

FOR FILING WITH THE ENERGY COMMISSION:

__X__ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (***preferred method***);

OR

____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 08-AFC-13
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

Original Signed By
Darin Neufeld

*indicates change