State Of California The Resources Agency of California

Memorandum

Date: July 30, 2010
Telephone: (916) 654-4679

DOCKET
07-AFC-5
DATE JUL 30 2010
RECD. JUL 30 2010

To: Commissioner Jeffrey Byron, Presiding Member
Commissioner James D. Boyd, Associate Member

From: California Energy Commission – John Kessler, Project Manager
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: **ENERGY COMMISSION STAFF'S TRANSMITTAL OF UPDATED RENEWABLE ENERGY ACTION TEAM AGENCY GUIDANCE FOR MITIGATION COST ESTIMATES AND DESERT TORTOISE TRANSLOCATION - IVANPAH SOLAR ELECTRIC GENERATING SYSTEM (07-AFC-5)**

Since the Ivanpah Solar Electric Generating System (ISEGS) Final Staff Assessment Addendum was published in March 2010, the Renewable Energy Action Team (REAT) agencies have made considerable progress in developing a consistent and comprehensive approach to mitigating impacts to desert tortoise caused by renewable energy development in California's deserts. The REAT agencies include the U.S. Fish and Wildlife Service (USFWS), U.S. Bureau of Land Management (BLM), California Department of Fish and Game (CDFG), and the Energy Commission. Staff has attached an e-mail from Amy Fesnock, Threatened and Endangered Species Lead for the BLM California State Office, that describes the updated guidance from the REAT agencies for handling and moving desert tortoise prior to construction. This guidance reflects the consensus of desert tortoise experts at USFWS and CDFG. Staff's proposed Condition of Certification **BIO-9** (Desert Tortoise Translocation Plan), which was included in the Final Staff Assessment Addendum does not need to be revised to accommodate this updated guidance because the language of this condition already requires the final ISEGS Desert Tortoise Translocation/Relocation Plan to be consistent with current USFWS approved guidelines.

In addition to updated desert tortoise translocation guidance, the REAT agencies have developed a total cost accounting method for calculating acquisition or conservation easement costs for mitigation lands, including costs associated with the purchase transactions, appraisal, escrow, and title insurance including mineral, oil, and gas rights. The estimate also addresses costs of initial enhancement (e.g., signs, fencing, and boundary/property line surveys; or restoration actions such as removal of exotic species, roads), management for ongoing activities such as public access and enforcement; and monitoring the implementation, effectiveness, and compliance of conservation measures with the goals and objectives of the mitigation. For those projects using the REAT- National Fish and Wildlife Foundation (NFWF) Mitigation Account for implementing mitigation actions, the budget includes administration of contracts and reporting.

PROOF OF SERVICE (REVISED 11/23/09) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 7/30/10
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Staff has attached a table from the REAT agencies summarizing the generic method for applying the total cost accounting to acquisition and management of compensatory mitigation lands. BLM's Final Environmental Impact Statement (FEIS) for the ISEGS project will include a similar cost estimate for their 1:1 desert tortoise mitigation requirements that relies on the same table to estimate the cost of desert tortoise mitigation security.

BLM's FEIS will also include more specific details on the desert tortoise enhancement actions (fencing of roadways, reclamation of closed routes and habitat enhancement) that were not discussed in the FSA and FSA Addendum. Implementation of BLM's proposed enhancement actions combined with the 2:1 desert tortoise mitigation described in staff's Condition of Certification **BIO-17** will meet the requirements of the California Environmental Quality Act and California Endangered Species Act. Staff has incorporated the details of BLM's proposed desert tortoise enhancement actions as well as the updated cost estimates in the attached revised **BIO-17** (Desert Tortoise Compensatory Mitigation). Staff's proposed Conditions of Certification. **BIO-18** (Special-Status Plant Impact Avoidance and Minimization) and **BIO-20** (Streambed Impact Minimization and Compensation Measures) have also been revised to reflect the updated REAT guidance on compensatory mitigation costs. These cost estimates are used for purposes of establishing an appropriate security amount in conditions of certification. However, renewable energy developers are not required to use the NFWF-REAT Mitigation Account to fulfill their land acquisition mitigation obligations and may elect to implement mitigation on their own consistent with the requirements of the applicable conditions of certification.

Docket (07-AFC-5)
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Attachment 1

STAFF'S TRANSMITTAL OF UPDATED RENEWABLE ENERGY ACTION TEAM AGENCY GUIDANCE FOR MITIGATION COST ESTIMATES AND DESERT TORTOISE TRANSLOCATION INFORMATION

JULY 30, 2010

7/22/2010 Electronic Communication from BLM to USFWS and CDFG

Information amending the Biological Assessment for Ivanpah Solar Electric Generating System

NOTE: This communication was transmitted to John Kessler, California Energy Commission from Tom Hurshman, Bureau of Land Management Project Manager for Ivanpah Solar Energy Generating System project (ISEGS).

The following email from Amy Fesnock to Brian Croft and to Becky Jones was submitted to the Fish and Wildlife Service and the California Department of Fish and Game as BLM's amendment to the Biological Assessment. It describes the details of the modified desert tortoise translocation strategy for the ISEGS project, to be used in finalizing the Biological Opinion.

July 22, 2010
SUBJECT: Ivanpah Solar Electric Generating System (07-AFC-5), Desert Tortoise Translocation Plan Modifications
FROM: Original email from Amy Fesnock, Bureau of Land Management
TO: Brian Croft USFWS, and Becky Jones, CDFG

CONTENT: This email serves to modify the ISEGS BA. The information provided updates components of the desert tortoise translocation (detailed below).

Additionally, we want to clarify/modify habitat enhancement actions we provided on May 26, 2010, via email. These changes are: include Ivanpah Road in the list of potential areas to be fenced; identify that at least 50 miles of fencing will be constructed; identify that at least 50 OHV routes will be restored; and add that some funding may support a desert tortoise head start program if approved by the Desert Tortoise Recovery Office.

Summary of Revised Translocation Strategy for the Ivanpah Solar Electric Generating System (ISEGS)

IDENTIFICATION OF RECIPIENT SITES

For the ISEGS project, BLM, FWS, and CDFG have identified a potential translocation area in the Mojave National Preserve to accommodate some of the desert tortoises from Phase 1, Phase 2, and the Construction Logistics Area (CLA). The translocation area would be within an area bounded by Nipton Road, Ivanpah Road, Morning Star Mine Road, and the Ivanpah Mountains. We also identified the solar exclusion area that is immediately to the north of Phase 3 of the project as a potential translocation area for some individuals from Phase 3. In addition, the area immediately west of the project site that is part of BrightSource's currently proposed translocation area would accommodate all desert tortoises within 500 meters of the western fence line.

The BLM would establish more specific preliminary boundaries and dimensions for the translocation areas that the FWS would consider in the biological opinion. Draft FWS translocation guidance requires that the post-translocation density not be more than 1.3 times that of the nearest DWMA. For the purposes of the analysis in the biological opinion, the BLM would use existing information on densities (permanent study plots, line distance sampling data, etc.) in the area to establish the preliminary boundaries. The boundary would later be adjusted (made larger or smaller) based on the results of pre-translocation surveys that would determine actual densities and identify any additional considerations (i.e., presence of desert tortoises with clinical signs of URTD, areas of poor habitat, etc.). During these surveys, BrightSource would collect blood from all resident desert tortoises encountered and send these samples for ELISA testing. BrightSource would transmitter all resident animals that would be part of the post-translocation monitoring effort. For the Mojave National Preserve site, these surveys would occur in Fall 2010 or Spring 2011 to determine the final translocation boundaries prior to release of individuals in spring 2011. For the solar exclusion zone site, these surveys could occur later depending on the construction schedule for Phase 3.

Following establishment of the final translocation area boundaries, BrightSource would fence all major roads within 10 kilometers of the

translocation area boundary. For less heavily traveled roads (i.e., two lane highways), BrightSource would need to fence both sides of the road. At a minimum the following will need to be fenced: Nipton Road from I-15 to Ivanpah Road, Ivanpah Road from Nipton Road to Morning Star Mine Road, 6.5 miles of Morning Star Mine Road starting at the junction with Ivanpah Road. More of Morning Star Mine Road may need to be fenced, depending upon how far south the receptor sites are identified. Fencing must be in place prior to the release of the tortoises in Spring 2011.

IDENTIFICATION OF CONTROL AREAS

In addition to the translocation area, BLM would identify a control area that BrightSource would use in the post-translocation monitoring effort. The FWS draft translocation guidance recommends that the monitoring effort contain at least as many desert tortoises in the control population as there are in the translocated population. BrightSource would perform pre-translocation surveys of the control population. During these surveys, BrightSource would collect blood from all desert tortoises encountered and send these samples for ELISA testing. BrightSource would transmitter all animals from the control population that would be part of the post-translocation monitoring effort. The control population would need to be established in the fall of 2010. Additional animals may need to be added to the control population to maintain an adequate sample size if clearance surveys identify more individuals on the phases than was initially anticipated.

TRANSLOCATION PROCEDURES

BrightSource can either fence all phases of its project in fall 2010 or it can fence each phase immediately prior to desert tortoise clearance surveys. FWS would only authorize clearance surveys of a given phase prior to construction rather than full clearance of all three phases in the fall of 2010. For example, if construction was to begin on Phase 3 in spring 2011, clearance and quarantine of desert tortoises from that site could not occur until spring 2011. Consequently, fencing of all three phases may proceed in fall 2010, but clearance of desert tortoises from the site would only occur for the CLA and Phase 1 (as construction of these areas is planned for winter 2010-2011). The construction of power block for Phase 2 is planned for winter 2010-2011, but no work is planned for the remainder of Phase 2 until spring 2011. BrightSource will construct temporary tortoise proof fencing around Phase 2 power block and the access road to this area. Additionally, Bright Source will construct fencing that will separate phase 2 from the CLA and Phase 1 areas. Any tortoises located within this area, will be moved out of harm's way, immediately adjacent to the fence, but still within the Phase 2 area. Clearance for the remaining phases (2 and 3) would not occur until those phases are ready to proceed with construction.

The FWS only allows clearance surveys between April 1 and May 31 or September 1 and October 15. When clearing a given phase of the project, BrightSource would transmitter all desert tortoises and check them for clinical signs of disease. All healthy (i.e., they do not have clinical signs of disease) desert tortoises that are within 500 meters of the western fence would be placed over the fence. Desert tortoises from Phase 3 that are within 500 meters of the solar exclusion zone may also be place over the northern fence line of that phase. If BrightSource finds a desert tortoise with clinical signs of disease, it would remove it from the population and transfer it to a location agreed to by CDFG and FWS.

BrightSource would collect blood from all other desert tortoises (i.e., those further than 500 meters from the western fence). Tortoises located within CLA and Phase 1 of the project would then be moved to the Mojave National Preserve's desert tortoise research facility in Ivanpah Valley. Tortoises located in phase 2 and 3 would remain in situ, transmittered so they may be relocated when needed. Tortoises moved to MNP would remain in quarantine while ELISA tests are performed. The Mojave National Preserve has agreed to manage these desert tortoises at the facility if BrightSource

provides funding. Following receipt of ELISA testing results, a disposition plan for each desert tortoise from a given phase would be submitted to the FWS. Following review of the disposition plans, the FWS would authorize release of all ELISA negative desert tortoises into the final translocation area (i.e., Mojave National Preserve Site for Phases 1 and 2 and the CLA; Solar Exclusion Zone for Phase 3). Prior to release, the Mojave National Preserve would transmitter all individuals to facilitate monitoring. Desert tortoises would be evenly distributed across the translocation site allowing considerations for habitat quality and the presence of ELISA positive resident animals. Desert tortoises would not be released within 500 meters of an ELISA positive resident individual. Any desert tortoises that are ELISA positive would remain in quarantine and the Mojave National Preserve would contact the Service and CDFG to determine the final disposition of these animals. As phased clearance proceeds over the three-year construction time, the Service may require modification of translocation procedures or reinitiation of consultation based on the results of post-translocation monitoring that will begin with the translocation of individuals from Phase 1.

For Phase 2 and 3 tortoises remaining in situ, if some of the tortoise are ELISA positive, BrightSource would contact FWS and CDFG to determine the final disposition of these animals and they will be removed from the population in the Spring of 2011 . Any tortoises that were within 500 m of the ELISA positive tortoises would have to be retested in spring of 2011 to determine if their disease status has changed.

POST-TRANSLOCATION MONITORING

All translocated desert tortoises would be monitored for a period of 3 years after their release. Depending upon the results of this monitoring, FWS could require an additional 2 years of monitoring. The Mojave National Preserve has agreed to perform the required monitoring at the Mojave National Preserve's translocation site if it is provided funding from BrightSource. BrightSource would be responsible for monitoring of desert tortoises moved to the west of the project site and into the solar exclusion zone. Within the control population and resident population, BrightSource and/or the Mojave National Preserve would need to transmitter and monitor enough individuals to ensure that the control, resident, and translocated populations have an equal number of individuals. We currently predict that 36 desert tortoises will ultimately need to be moved from the 3 phases of this project. The monitoring effort would begin with 36 resident and 36 control desert tortoises in the fall of 2010. Additional animals may be added to this sample size if clearance surveys on the three phases finds more individuals than previously anticipated.

The frequency of monitoring and the types of data that would be collected are already identified in the draft biological opinion. The primary goal of the monitoring effort is to determine if the translocation is resulting in take resulting from the translocation rather than take that is the result of other mortality sources. This will be accomplished by comparing injury and mortality rates among the resident, translocated, and control populations. If monitoring shows that translocation is resulting in injury or mortality that is above naturally occurring levels for the Ivanpah Valley, adjustment in the translocation strategy or reinitiation of consultation may be warranted before additional phases are cleared of desert tortoises.

Please consider this email an amendment to the Biological Assessment and to be incorporated as part of the project description.

If you should have any questions, please give me a call.
Thanks for all your help.
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Amy L. Fesnock
Threatened and Endangered Species Lead
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Attachment 2

STAFF'S TRANSMITTAL OF UPDATED RENEWABLE ENERGY ACTION TEAM AGENCY GUIDANCE FOR MITIGATION COST ESTIMATES AND DESERT TORTOISE TRANSLOCATION INFORMATION

JULY 30, 2010

7/23/2010 Desert Renewable Energy, REAT Biological Resource Compensation/Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account and the REAT Biological Resources Mitigation/Compensation Cost Estimate Calculation Table

Ivanpah Solar Electric Generating System (07-AFC-5)

Desert Renewable Energy
REAT Biological Resource Compensation/Mitigation Cost Estimate[1]
Breakdown
for use with the REAT-NFWF Mitigation Account

July 23, 2010

	Task	Cost
1.	Land Acquisition	$1000 per acre[2]
2.	Level 1 Environmental Site Assessment	$3000 per parcel[3]
3.	Appraisal	$5000 per parcel
4.	Initial site work - clean-up, enhancement , restoration	$250 per acre[4]
5.	Closing and Escrow Costs – 2 transactions at $2500 each; landowner to 3rd party and 3rd party to agency[5]	$5000 for 2 transactions
6.	Biological survey for determining mitigation value of land (habitat based with species specific augmentation)	$5000 per parcel
7.	3rd party administrative costs - includes staff time to work with agencies and landowners; develop management plan; oversee land transaction; organizational reporting and due diligence; review of acquisition documents; assembling acres to acquire....	10% of land acquisition cost (#1)
8.	Agency costs to review and determine accepting land donation - includes 2 physical inspections; review and approval of the Level 1 ESA assessment; review of all title documents; drafting deed and deed restrictions; issue escrow instructions; mapping the parcels....	15% of land acquisition costs (#1) × 1.17 (17% of the 15% for overhead)
	SUBTOTAL *- Acquisition & Initial Site Work*	*$*
9.	Long-term Management and Maintenance (LTMM) - includes land management; enforcement and defense of easement or title [short and long term]; region-wide raven management; monitoring....	$1450 per acre[6]
	NFWF Fees	
10.	Establish the project specific sub-account[7]	$12,000
11.	Pre-proposal Modified RFP or RFP processing[8]	$30,000
12.	NFWF management fee for acquisition & initial site work	3% of SUBTOTAL
13.	NFWF management fee for LTMM	1% of LTMM
	TOTAL *for deposit into the Project Specific Sub-Account*	*$*

[1] All costs are best estimates as of summer 2010. Actual costs will be determined at the time of the transactions and may change the funding needed to implement the required mitigation obligation. Note: regardless of the estimates, the developer is responsible for providing adequate funding to implement the required mitigation (MOA V.I.).

[2] Generalized estimate taking into consideration a likely jump in land costs due to demand, and an 18-24 month window to acquire the land after agency decisions are made. If the agencies, developer, or 3rd party has better, credible information on land costs in the specific area where project-specific mitigation lands are likely to be purchased, that data overrides this general estimate. Note: regardless of the estimates, the developer is responsible for providing adequate funding to implement the required mitigation.

[3] For the purposes of determining costs, a parcel is 40 acres (based on input from the BLM California Desert District).

[4] Based on information from California Department of Fish and Game.

[5] Two transactions at $2500 each: landowner to 3rd party; 3rd party to agency. The transactions will likely be separated in time.

[6] Estimate for purposes of calculating general costs. The actual long term management and maintenance costs will be determined using a Property Assessment Report (PAR) tailored to the specific acquisition.

[7] Each renewable energy project will be a separate sub-account within the REAT-NFWF account, regardless of the number of required mitigation actions per project.

[8] If determined necessary by the REAT agencies if multiple 3rd parties have expressed interest; for transparency and objective selection of 3rd party to carryout acquisition.

REAT Biological Resources Mitigation/Compensation Cost Estimate Calculation Table - July 23, 2010[1]

	Desert Tortoise Compensation	Rare Plant Compensation	Streambed Compensation
Number of Acres* (3582 acres x 2)	7164	30	175
Estimated number of parcels to be acquired, at 40 acres per parcel[2]	180	1	5
Land cost at $1000/acre[3]	$7,164,000	$30,000	$175,000
Level 1 Environmental Site Assessment at $3000/parcel	$540,000	$3,000	$15,000
Appraisal at no less than $5,000/parcel	$900,000	$5,000	$25,000
Initial site work - clean-up, restoration or enhancement, at $250/acre[4]	$1,791,000	$7,500	$43,750
Closing and Escrow Cost at $5000 for 2 transactions[5]	$900,000	$5,000	$25,000
Biological survey for determining mitigation value of land (habitat based with species specific augmentation) at $5000/parcel	$900,000	$5,000	$25,000
3rd Party Administrative Costs (Land Cost x 10%)[6]	$716,400	$3,000	$17,500
Agency cost to accept land donation[7] (Land Cost x 15%) x 1.17 (17% of the 15% for overhead)	$1,257,282	$5,265	$30,713
SUBTOTAL - Acquisition and Initial Site Work	$14,168,682	$63,765	$356,963
Long-term Management and Maintenance (LTMM) fee at $1450/acre [8]	$10,387,800	$43,500	$253,750
NFWF Fees			
Establish Project Specific Account[9]	$12,000		
Call for and Process Pre-Proposal Modified RFP or RPF [10]	$30,000		
NFWF Management fee for Acquisition and Enhancement Actions (Subtotal x 3%)	$425,060	$1,913	$10,709
NFWF Management Fee for LTMM account (LTMM x 1%)	$103,878	$435	$2,538
Subtotal of NFWF Fees	$570,938	$2,348	$13,246
TOTAL Estimated cost for deposit in project specific sub-account	**$25,127,420**	**$109,613**	**$623,959**

[1] All costs are best estimates as of summer 2010. Actual costs will be determined at the time of the transactions and may change the funding needed to implement the required mitigation obligation. Note: regardless of the estimates, the developer is responsible for providing adequate funding to implement the required mitigation.

[2] For the purposes of determining costs, a parcel is defined at 40 acres, recognizing that some will be larger and some will be smaller, but that 40 acres provides a good estimate for the number of transactions anticipated (based on input from CDD).

[3] Generalized estimate taking into consideration a likely jump in land costs due to demand, and an 18-24 month window to acquire the land after agency decisions are made. If the agencies, developer, or 3rd party has better, credible information on land costs in the specific area where project-specific mitigation lands are likely to be purchased, that data overrides this general estimate. Note: regardless of the estimates, the developer is responsible for providing adequate funding to implement the required mitigation.

[4] Based on information from CDFG.

[5] Two transactions at $2500 each: landowner to 3rd party; 3rd party to agency. The transactions will likely be separated in time.

[6] includes staff time to work with agencies and landowners; develop management plan; oversee land transaction; organizational reporting and due diligence; review of acquisition documents; assembling acres to acquire….)

[7] Includes agency costs to accept the land into the public management system and costs associated with tracking/managing the costs associated with the donation acceptance, including 2 physical inspections; review and approval of the Level 1 ESA assessment; review of all title documents; drafting deed and deed restrictions; issue escrow instructions; mapping the parcels….

[8] Estimate for purposes of calculating general costs. The actual long term management costs will be determined using a Property Assessment Report (PAR) tailored to the specific acquisition. Includes land management; enforcement and defense of easement or title [short and long term]; monitoring….

[9] Each renewable energy project will be a separate sub-account within the REAT-NFWF account, regardless of the number of required mitigation actions per project.

[10] If determined necessary by the REAT agencies if multiple 3rd parties have expressed interest; for transparency and objective selection of 3rd party to carryout acquisition.

* 3528 acres = Total project disturbance (source: Table 2, ISEGS Long Term and Temporary Disturbance of BLM Land, ISEGS Final Staff Assessment Addendum, March 2010)

Attachment 3

STAFF'S TRANSMITTAL OF UPDATED RENEWABLE ENERGY ACTION TEAM AGENCY GUIDANCE FOR MITIGATION COST ESTIMATES AND DESERT TORTOISE TRANSLOCATION INFORMATION

JULY 30, 2010

7/29/2010 Revised Biological Resources Conditions of Certification BIO-17, BIO-18, and BIO-20

Ivanpah Solar Electric Generating System (07-AFC-5)

IVANPAH SOLAR ELECTRIC GENERATING SYSTEM (07-AFC-5)

Revised Biological Resources Conditions of Certification

July 29, 2010

Note: Staff revisions made on July 29, 2010 are indicated by double strike-through for deletions and double underlining for additions. Single underline and strike-through reflect other previous updates since publishing the FSA-DEIS.

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 at a 3:1 ratio for impacts to ~~4,073~~ 3,582 acres or the area disturbed by the final project footprint. At least two thirds of the 3:1 mitigation requirement ~~to satisfy the Energy Commission's Complementary Mitigation Measures~~ shall be achieved by acquisition, in fee title or in easement, of no less than ~~8,146~~ 7,164 acres of land suitable for desert tortoise. The Energy Commission's compensatory mitigation requirement consists of habitat acquisition at a 2:1 ratio and is complementary to the BLM's 1:1 desert tortoise mitigation approach of habitat enhancement. The project owner shall provide funding for the acquisition, initial habitat improvements and long-term management ~~endowment of~~ for the Energy Commission's ~~complementary~~ compensation lands. The remaining third of the 3:1 compensatory mitigation, to satisfy BLM's mitigation requirements and the balance of the Energy Commission's mitigation requirements, shall be developed in accordance with BLM's desert tortoise mitigation requirements as described in the Northern and Eastern Mojave Desert Management Plan (BLM 2002). BLM's compensatory mitigation plan, serving as one third of the 3:1 mitigation ratio required to satisfy CESA, ~~would~~ consists of ~~include acquisition of up to 3,582 acres of land within the Eastern Mojave Recovery Unit, or~~ desert tortoise habitat enhancement ~~or rehabilitation activities,~~ including installation of at least 50 miles of desert tortoise exclusion fencing on roadways in the Northeastern Mojave Recovery Unit, and habitat restoration of at least 50 routes within the Desert Wildlife Management Area. ~~that meet BLM, CDFG, USFWS and Energy Commission approval, or some combination of the two.~~ In lieu of acquiring lands and implementing the fencing and habitat enhancement described above, 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) in an amount equivalent to the sum of: 1) BLM's compensatory

mitigation cost covering the cost of fencing and route restoration; and 2) the costs of acquiring, enhancing and managing the Energy Commission compensation lands and 3) the Long-Term Maintenance of Fencing and Habitat Restoration Fee, as described below in #6. The Energy Commission requirements for acquisition of ~~8,146~~ 7,164 acres of compensation lands and maintenance of fencing and habitat enhancements shall include the following:

1. Responsibility for Acquisition of Compensation Lands: The responsibility for acquisition of compensation lands may be delegated by written agreement from the Energy Commission and CDFG to a third party, such as a non-governmental organization supportive of Mojave Desert habitat conservation. Such delegation shall be subject to approval by the CPM ~~and CDFG,~~ in consultation with BLM, CDFG and USFWS, prior to land acquisition, enhancement or management activities. If habitat disturbance exceeds that described in this analysis, the project owner shall be responsible for funding acquisition, habitat improvements and long-term management of additional compensation lands or additional funds required to compensate for any additional habitat disturbances. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. Water and mineral rights shall be included as part of the land acquisition. Agreements to delegate land acquisition to CDFG or an approved third party and to manage compensation lands shall be implemented within 18 months of the Energy Commission's decision.

2. Selection Criteria for Compensation Lands. The compensation lands selected for acquisition shall:

   a. be as close to the project site as possible;

   b. provide good quality habitat for desert tortoise with capacity to regenerate naturally when disturbances are removed;

   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. be connected to lands currently occupied by desert tortoise, ideally with populations that are stable, recovering, or likely to recover;

   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, and

g. not contain hazardous wastes.

3. Review and Approval of Compensation Lands Prior to Acquisition. A minimum of three months prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to the CPM, CDFG, USFWS and BLM describing the parcel(s) intended for purchase. This acquisition proposal shall discuss the suitability of the proposed parcel(s) as compensation lands for desert tortoise in relation to the criteria listed above. Approval from ~~CDFG and~~ the CPM, in consultation with BLM, CDFG and the USFWS, shall be required for acquisition of all parcels comprising the ~~8,146~~ 7,164 acres.

4. Energy Commission Compensation Land ~~Complementary~~ Mitigation Security The project owner shall provide financial assurances to the CPM and CDFG with copies of the document(s) to BLM and the USFWS, to guarantee that an adequate level of funding is available to implement the Energy Commission ~~Complementary~~ compensation land ~~M~~mitigation requirement described in this condition (Condition of Certification BIO-17). These funds shall be used solely for implementation of the measures associated with the project. Alternatively, financial assurance can be provided to the CPM and CDFG 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 ~~CDFG and~~ the CPM, in consultation with BLM, CDFG and the USFWS, to ensure funding in the amount of $25,127,420 ~~$17,981,640~~. This Security amount was calculated in accordance with the REAT Biological Resource Compensation /Mitigation Cost Estimate Breakdown for use with the REAT-NFWF Mitigation Account dated July 23, 2010. The actual costs to comply with this condition will vary depending on the final footprint of the Project, and the actual costs of acquiring, improving and managing the compensation lands. ~~as follows and may be revised upon completion of a Property Analysis Record (PAR) or PAR-like analysis of the proposed compensation lands.~~

~~a. land acquisition costs for compensation lands, calculated at $910/acre = $6,519,240;~~

~~b. costs of initial habitat improvements to compensation lands, calculated at $250/acre = $1,791,000;~~

~~c. costs of establishing a fund for long-term management of compensation lands, calculated at $1,350/acre = $9,671,400; and~~

~~d. total Energy Commission security for acquisition = $17,981,640.~~

5. Compensation Lands Acquisition Conditions The project owner shall comply with the following conditions relating to acquisition of the Energy Commission ~~Complementary Mitigation~~ compensation lands after the CDFG and the CPM, in consultation with BLM and the USFWS, have approved the proposed compensation lands and received Security as applicable and as described above.

   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 documents for the proposed ~~8,146~~ 7,164 acres. All documents conveying or conserving compensation lands and all conditions of title/easement are subject to a field review and approval by ~~CDFG and~~ the CPM, in consultation with BLM, CDFG and the USFWS, California Department of General Services and, if applicable, the Fish and Game Commission and/or the Wildlife Conservation Board.

   b. Title/Conveyance: The project owner shall transfer fee title or a conservation easement to the ~~8,146~~ 7,164 acres of compensation lands to CDFG under terms approved by CDFG. Alternatively, a non-profit organization qualified to manage compensation lands (pursuant to California Government Code section 65965) and approved by CDFG and the CPM may hold fee title or a conservation easement over the habitat mitigation lands. If the approved non-profit organization holds title, a conservation easement shall be recorded in favor of CDFG in a form approved by CDFG. If the approved non-profit holds a conservation easement, CDFG shall be named a third party beneficiary. If a Security is provided, the project owner or an approved third party shall complete the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities.

   c. Initial Habitat Improvement Fund. The project owner shall fund the initial protection and habitat improvement of the ~~8,146~~ 7,164 acres. Alternatively, a non-profit organization may hold the habitat improvement funds if they are qualified to manage the

compensation lands (pursuant to California Government Code section 65965) and if they meet the approval of ~~CDFG and~~ the CPM in consultation with CDFG. If CDFG takes fee title to the compensation lands, the habitat improvement fund must go to CDFG.

d. Long-term Management ~~Endowment~~ and Maintenance Fund. Prior to ground-disturbing project activities, the project owner shall provide to CDFG a non-wasting capital ~~endowment~~ long-term management and maintenance fee in the amount determined through the Property Analysis Record (PAR) or PAR-like analysis that will be conducted for the ~~8,146~~ 7,164 acres. ~~The project owner's financial responsibility for the actual cost of mitigation shall not increase by more than 25% of the Security Amount $17,981,640).~~ Alternatively, a non-profit organization may hold the ~~endowment~~ long-term management and maintenance fees if they are qualified to manage the compensation lands (pursuant to California Government Code section 65965) and if they meet the approval of ~~CDFG and~~ the CPM in consultation with CDFG. If CDFG takes fee title to the compensation lands, the ~~endowment~~ long-term management and maintenance fee must go to CDFG, where it will be held in the special deposit fund established pursuant to California Government Code section 16370. If the special deposit fund is not used to manage the ~~endowment~~ long-term management and maintenance fund, the California Wildlife Foundation or similarly approved entity identified by CDFG shall manage the long-term management and maintenance fund ~~endowment~~ for CDFG and with CDFG supervision.

e. Interest, Principal, and Pooling of Funds. The project owner, CDFG and the CPM shall ensure that an agreement is in place with the long-term management and maintenance fund ~~endowment~~ holder/manager to ensure the following conditions:

- Interest. Interest generated from the initial capital endowment shall be available for reinvestment into the principal and for the long-term operation, management, and protection of the approved compensation lands, including reasonable administrative overhead, biological monitoring, improvements to carrying capacity, law enforcement measures, and any other action approved by CDFG designed to protect or improve the habitat values of the compensation lands.
- Withdrawal of Principal. The long-term management and maintenance fund ~~endowment~~ principal shall not be drawn upon unless such withdrawal is deemed necessary by the

CDFG or the approved third-party long-term management and maintenance fund ~~endowment~~ manager to ensure the continued viability of the species on the ~~8,146~~ 7,164 acres. 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 pursuant to Government Code section 16370. If the special deposit fund is not used to manage the long-term management and maintenance fund ~~endowment~~, the California Wildlife Foundation or similarly approved entity identified by CDFG will manage the long-term management and maintenance fund ~~endowment~~ for CDFG with CDFG supervision.

- Pooling Long-Term Management and Maintenance Fund E~~ndowment~~ Funds. CDFG, or a CPM and CDFG approved non-profit organization qualified to hold long-term management and maintenance fund ~~endowment~~ pursuant to California Government Code section 65965, may pool the long-term management and maintenance fund ~~endowment~~ with other ~~endowments~~ such funds for the operation, management, and protection of the ~~8,146~~ 7,164 acres for local populations of desert tortoise. However, for reporting purposes, the long-term management and maintenance fund ~~endowment~~ fund must be tracked and reported individually to the CDFG and CPM.
- 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.

6. Long-term Maintenance of Fencing and Habitat Restoration. In addition to the funding described above for the acquisition, enhancement and management the Energy Commission compensation lands, the Project owner shall provide sufficient funds to maintain the habitat improvements required by BLM for the ISEGS project, including fencing of roads in the Northeastern Mojave Recovery Unit, and habitat restoration of routes in the Desert Wildlife Management Area. The maintenance shall occur as long as the roads continue to operate as functional roadways and for the duration of project impacts. This long-term maintenance fee shall be calculated upon completion of a Property Analysis Record (PAR) or PAR-like analysis of the proposed enhancement actions, and shall be sufficient to fund annual inspections and repairs /maintenance of all fencing and habitat improvements completed as

part of the BLM mitigation requirements for the ISEGS project. The project owner shall deposit the long-term maintenance fee into the REAT-NFWF account or another third-party recipient acceptable to the CPM and CDFG within 18 months of the Energy Commission decision.

The project owner is responsible for all compensation lands acquisition/easement costs, including but not limited to, title and document review costs, as well as expenses incurred from other state agency reviews and overhead related to providing compensation lands to the department or approved third party; escrow fees or costs; environmental contaminants clearance; and other site cleanup measures.

The Project owner may choose to satisfy its mitigation obligations identified in this Decision by paying an in lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099 or any other applicable in-lieu fee provision, to the extent the in-lieu fee provision is found by the Commission to be in compliance with CEQA and CESA requirements.

Verification: A minimum of three months prior to acquisition of the property, the project owner shall submit a formal acquisition proposal to the CPM, CDFG, USFWS and BLM describing the parcels intended for purchase.

No later than 18 months following the publication of the Energy Commission Decision the project owner shall provide written verification to the CPM and CDFG that the Energy Commission ~~Complementary Mitigation~~ compensation lands or conservation easements have been acquired and recorded in favor of the approved recipient(s). Alternatively, no later than 30 days prior to beginning project ground-disturbing activities, the project owner shall provide written verification of Security in accordance with this condition of certification. If Security is provided, the project owner, or an approved third party, shall complete and provide written verification of the proposed compensation lands acquisition within 18 months of the start of project ground-disturbing activities. 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. Within six months of the land or easement purchase, as determined by the date on the title, the project owner, or an approved third party, shall provide CDFG and the CPM with a management plan for the Energy Commission ~~Complementary Mitigation~~ compensation lands and associated funds~~.. CDFG and t~~ The CPM shall review and approve the management plan, in consultation with CDFG, BLM and the USFWS.

Within 90 days after completion of project construction, the project owner shall provide to the CPM and CDFG an analysis with the final accounting of the amount of habitat disturbed during project construction. If habitat disturbance exceeds 3,582 acres, the project owner shall provide a compensation plan to the

CMP ~~and CDFG~~ for their review and approval, in consultation with CDFG, BLM and the USFWS. The compensation plan shall be submitted no later than 90 days from the CPM's receipt of the final accounting, and shall include a description of additional funds required or lands that must be purchased to compensate for the unanticipated habitat disturbances, and a schedule for that acquisition or funding inclusive of all associated long-term management and maintenance fund ~~endowment~~ and enhancement costs. The amount of funding for habitat acquisition, initial habitat improvement, and long-term management ~~endowment~~ fund shall be calculated at the adjusted market value at the time of construction. ~~The project owner's financial responsibility for the actual cost of mitigation shall not increase by more than 25% of the Security Amount ($17,981,640).~~

No more than 60 days prior to ground-disturbing project activities ~~No later than 12 months following the publication of the Energy Commission Decision~~ the project owner shall provide to the CPM ~~and CDFG~~ for review and approval a Property Analysis Record (PAR) or PAR-like analysis to establish the appropriate amount for the long-term maintenance fee to fund maintenance of the proposed enhancement actions (desert tortoise exclusion fencing and DWMA route restoration).

No more than 30 days prior to ground-disturbing project activities ~~No later than 18 months following publication of the Energy Commission Decision~~ the project owner shall deposit the long-term maintenance fee to the REAT-NFWF account or another third-party recipient approved by the CPM in consultation with CDFG.

Starting with the first year following construction and continuing for the duration of project impacts the project owner shall provide to the CPM and CDFG an annual report describing: the results of the annual inspection of fencing and rehabilitated routes; a summary of fence repairs and maintenance of reclaimed routes completed during the year; and recommendations and a cost estimate for repairs and maintenance activities needed for the upcoming year.

If the project owner elects to satisfy its mitigation obligations by paying an in-lieu fee instead of acquiring compensation lands, pursuant to Fish and Game code sections 2069 and 2099 or any other applicable in-lieu fee provision, 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.

SPECIAL-STATUS PLANT IMPACT AVOIDANCE AND MINIMIZATION

BIO-18 The project owner shall implement the following measures to avoid and minimize impacts to special-status plant species. Items 2, 3, 5, 6, 7, ~~and~~ 10, and 11 are recommended exclusively by Energy Commission staff.

1. On-Site Plant Avoidance/Minimization Areas: To the extent feasible the project owner shall avoid and minimize disturbance to all special-status plant species within the project site. Impact avoidance (i.e., protection from project-related impacts of any kind through removal of acreage from the project footprint) and impact minimization efforts shall occur in all feasible locations. Impact avoidance shall focus on areas that support the highest density and diversity of special-status plant species and shall remove, at a minimum, ~~shall focus in particular on~~ the three areas totaling 476 acres and labeled "Rare Plant Mitigation Area" in **Project Description Figure 13** from the project footprint. The natural gas pipeline shall be aligned and narrowed to avoid special-status plant occurrences north of Ivanpah 3 as depicted in **Project Description Figure 13**. Impact minimization shall be conducted throughout the site. ~~depicted in **Biological Resources Figure 2** that indicate the highest densities of small-flowered androstephium, Mojave milkweed, Rusby's desert-mallow, desert pincushion, nine-awned pappus grass, and Parish's club-cholla. The highest priorities for protection shall be~~ Impact minimization within the solar field shall consist of protecting small perimeters ("halos") around Mojave milkweed, desert pincushion, and Rusby's desert-mallow plants as indicated in the applicant's January 2010 draft plan (Exhibit 81, Appendix B). ~~The project owner shall implement all feasible impact avoidance and minimization measures within the following areas:~~

   ~~a. ISEGS 1 and 3: Reconfigure project features to the extent feasible within the northern portions of ISEGS 1 and 3 to avoid areas that support the highest density and diversity of special-status plant species.~~

   ~~b. Construction Logistics Area: Reconfigure the layout and design of the Construction Logistics Area to maximize protection of high density and diversity special-status plant areas.~~

   ~~c. Natural Gas Pipeline: Adjust the alignment of the proposed 75-foot wide natural gas pipeline and narrow the construction footprint to avoid special-status plant occurrences north of ISEGS 3.~~

2. Protection Goals : The project owner shall implement all feasible measures to protect 75 percent of the individuals of small-flowered

androstephium, Mojave milkweed, Rusby's desert-mallow, desert pincushion, nine-awned pappus grass, and Parish's club-cholla within the project area (as mapped in Figure 5-3 of the applicant's final botanical survey report [CH2M Hill 2008x]). Each year during construction the measurement of percent protection achieved shall be calculated based on a comparison of numbers of individuals of each of these five species present in this area identified before construction compared to numbers remaining post –construction. These pre- and post-construction plant numbers shall be based on floristic surveys conducted by a qualified botanist.

3. Identify and Establish Special-Status Plant Protection Areas: The project owner shall identify Special-Status Plant Protection Areas ~~within~~ for exclusion from the project footprint and avoidance of project-related impacts of any kind ~~as needed~~ to ~~achieve~~ facilitate achieving the 75 percent protection goal. To accurately identify the ~~locations~~ boundaries of these areas, pre-construction floristic surveys shall be conducted by a qualified botanist at the appropriate time of year for special-status plant identification, including both spring and summer/fall blooming periods. The surveys shall encompass at a minimum the three areas totaling 476 acres and labeled "Rare Plant Mitigation Area" in **Project Description Figure 13** ~~all the high plant density areas depicted in **Biological Resources Figure 2**~~ and shall extend 150 feet on both sides of the proposed gas pipeline alignment and 250 feet out from the project fenceline. The locations of the Special-Status Plant Protection Areas shall be clearly depicted on all final maps and project drawings and descriptions for exclusion of all project activities.

4. Protection of Adjacent Occurrences: The project owner shall identify special-status plants occurrences within 250 feet of the project fenceline during the pre-construction plant surveys described above. A qualified botanist shall delineate the boundaries of these special status plant occurrences ~~at least 30 days~~ prior to the initiation of ground disturbing activities. These flagged special status plant occurrences shall be designated as Environmentally Sensitive Areas on plans and specifications, and shall be protected from accidental impacts during construction (e.g., vehicle traffic, temporary placement of soils or vegetation) and from the indirect impacts of project operation (e.g., herbicide spraying, changes in upstream hydrology, etc).

5. Develop and Implement a Special-Status Plant Protection and Monitoring Plan: The project owner shall develop and implement a Special-Status Plant Protection and Monitoring Plan for special-status plants occurring within the Special-Status Plant Protection Areas and on-site areas designated for impact minimization. The goal of the Special-Status Plant Protection and Monitoring Plan shall be to maintain the special-status plant species ~~within the Special-Status Plant Protection Areas~~ as healthy, reproductive populations that can be sustained in perpetuity. At a minimum, the Special-Status Plant Protection and Monitoring Plan shall:

   - establish baseline conditions and numbers of the plant occurrences in all protected areas (i.e., those to be excluded from the footprint and on-site areas to be protected) ~~within the Special-Status Plant Protection Areas~~ and success standards for protection of special-status plant occurrences ~~within the Plant Protection Areas~~;
   - provide information about microhabitat preferences and fecundity, essential pollinators, reproductive biology, and propagation and culture requirements for each special-status species;
   - describe measures (e.g., fencing, signage) to avoid direct construction and operation impacts to special-status plants within ~~the~~ all protected areas~~Special-Status Plant Protection Areas~~;
   - describe measures to avoid or minimize indirect construction and operations impacts to special-status plants within ~~the Special-Status Plant Protection Areas~~ protected areas (e.g., runoff from mirror-washing, use of soil stabilizers/tackifiers, alterations of hydrology from drainage diversions, erosion/sedimentation from disturbed soils upslope, herbicide drift, the spread of non-native plants, etc).
   - provide a monitoring schedule and plan for assessing the numbers and condition of special-status plants ~~within the Special-Status Plant Protection Areas~~; and
   - identify specific triggers for remedial action (e.g., numbers of plants dropping below a threshold);

6. Develop Special-Status Plant Remedial Action Plan : The project owner shall develop a detailed Special-Status Plant Remedial Action Plan to be implemented if special-status plants within the ~~Plant Protection Areas~~ 476 acres of protected area and on-site minimization "halos" fail to meet success standards described in the Special-Status Plant Protection and Monitoring Plan. The Plant

Remedial Action Plan shall include specifications for ex-situ/off-site conservation of seed and other propagules, and the seed bank and other symbionts contained in the topsoil where these plants occur. The remedial measures described in the Plant Remedial Action Plan shall not substitute for plant protection or other mitigation measures. The Special-Status Plant Remedial Action Plan shall include, at a minimum:

- guidelines for pre-construction seed collection (and/or other propagules) for each ~~of the five~~ species;
- specifications for collecting, storing, and preserving the upper layer of soil containing seed and important soil organisms;
- detailed replacement planting program with biologically meaningful quantitative and qualitative success criteria (see Pavlik 1996), monitoring specifications, and triggers for remedial action; and
- ecological specifications for suitable planting sites.

7. Seed Collection: Implementation of the Special-Status Plant Remedial Action Plan would require a source of local source of seeds/propagules. In addition, seed collection would serve to preserve germplasm in the event that all mitigation fails. The project owner shall develop and implement a Seed Collection Plan to collect and store seed for small-flowered androstephium, Mojave milkweed, Rusby's desert-mallow, desert pincushion, nine-awned pappus grass, and Parish's club-cholla. The source of these seeds shall be from plants proposed for removal within the project footprint. The project owner shall engage the services of a qualified contractor approved by the CPM to undertake seed collection and storage.

8. Gas Pipeline Revegetation and Monitoring: In the natural gas pipeline construction corridor where disturbed soils will be revegetated, the topsoil excavated shall be segregated, kept intact, and protected, under conditions shown to sustain seed bank viability. At a minimum, the top 2 cm of the soil shall be separately stored and preserved. Topsoil salvage, storing, and replacement shall be replaced in its original vertical orientation following pipeline installation ensuring the integrity of the top 2 cm in particular. The project owner shall prepare a Gas Pipeline Revegetation and Monitoring Plan targeted at re-establishment of Rusby's desert-mallow, desert pincushion, Mojave milkweed, and potentially other special-status plant species. The Gas Pipeline Revegetation and Monitoring Plan shall identify success criteria for re-establishment

and shall continue for a period of no less than 10 years until the defined success criteria are achieved. The Gas Pipeline Revegetation and Monitoring Plan shall include measures for seeding or other remedial actions. If no individuals of Rusby's desert-mallow, desert pincushion, or Mojave milkweed, are located during the first year of monitoring, the project owner shall conduct supplemental seeding or other remedial measures in the area disturbed by natural gas pipeline installation.

9. Surveys on Acquired and Public Lands: The project owner shall conduct floristic surveys for Rusby's desert-mallow and Mojave milkweed on all lands that will be acquired as part of the desert tortoise compensatory mitigation requirements (see Condition of Certification **BIO-17**). ~~Similar surveys shall be conducted for desert pincushion, nine-awned pappus grass, and Parish's club-cholla for those species for which the 75 percent on-site avoidance goal has not been achieved.~~ The goal of the surveys shall be to identify at least the same number of occurrences on off-site compensation or public lands as the number of occurrences in the project area excluding the occurrences in the Special-Status Plant Protection Areas in **Project Description Figure 13** ~~were impacted by the ISEGS project~~. If this goal is not met by surveys on proposed acquisition lands, additional surveys shall be conducted within suitable habitat on public lands ~~until the same number of occurrences of each species that were impacted are identified~~. To be counted toward fulfillment of the goal, the occurrences must reflect new data not previously documented in other survey efforts. The survey requirements shall include the following:

   - All surveys shall be conducted by a qualified botanist in accordance with BLM, CDFG, and CNPS plant survey guidelines;
   - Surveys shall occur the first spring after construction begins and continue each year for a maximum of ten years until the same number of ~~special-status plant~~ Mojave milkweed and Rusby's desert-mallow occurrences are identified on acquisition lands and/or ~~BLM~~ public lands as located outside Special-Status Plant Protection Areas~~as were impacted, or predicted to be impacted based on final site design, by the ISEGS project construction and operation~~;
   - For each year surveys are conducted yearly survey results shall be provided to the CPM, BLM's Authorized Officer and CDFG, and shall include CNDDB field survey forms for all special-status plant species encountered during the surveys;

- All field survey forms shall be submitted to the CNDDB at the time of submittal to the CPM, BLM and CDFG; and
- ~~For each of the species for which surveys were conducted, t~~The project owner's qualified botanist shall submit a completion report documenting fulfillment of the target goals and which describe the number of new, previously undiscovered occurrences identified and mapped. Locations shall be reported with GPS coordinates compatible with inclusion in a GIS database.

10. Security for Implementation of Plans : The project owner shall provide security adequate to fund implementation of the Special-Status Plant Protection and Monitoring Plan, the Special-Status Plant Remedial Action Plan for the life of the project, as well as the Seed Collection Plan, and the Gas Pipeline Revegetation Monitoring Plan.

11. Acquire Off-Site Occurrence of Mojave Milkweed or Adjacent Land: The project owner shall acquire, in fee or in easement, a parcel or parcels of land that includes at least 30 acres supporting a viable occurrence of Mojave milkweed (or suitable habitat adjacent to a known occurrence). The terms and conditions of this acquisition or easement shall be as described in Condition of Certification **BIO-17** with the additional criteria that the Mojave milkweed mitigation lands: 1) provide habitat for the special-status plant species that is of similar or better quality (e.g., in terms of native plant composition) than that impacted; 2) contain OR abut a known occurrence of Mojave milkweed, ideally with populations that are stable, recovering, or likely to recover, that shares the same watershed as the land; and 3) be adequately sized and buffered to support self-sustaining special-status plant populations. These mitigation lands may be included with the desert tortoise mitigation lands ONLY if the above criteria are met. Estimated security for acquisition of compensation lands for Mojave milkweed is $109,618. If sufficient new Mojave milkweed occurrences are discovered on desert tortoise compensation lands (not public lands) in accordance with item 9 above prior to acquiring this land, the associated security shall be refunded to the project owner.

Verification: No less than 30 days following the publication of the Energy Commission Decision the project owner shall submit final maps and design drawings depicting the location of Special-Status Plant Protection Areas within and adjacent to the project site, and shall identify the species and numbers of plants within each of the Special-Status Plant Protection Areas.

No less than 30 days following the publication of the Energy Commission Decision the project owner shall submit draft versions of the Special-Status Plant

Protection and Monitoring Plan, the Special-Status Plant Remedial Action Plan, the Seed Collection Plan, and the Gas Pipeline Revegetation Monitoring Plan for review by the CPM, BLM's Authorized Agent, and CDFG. The project owner shall also provide a cost estimate for implementation of these plans which is subject to approval by the CPM, BLM's authorized agent, and the CDFG. The final plans shall be submitted for approval by the CPM, in consultation with BLM's Authorized Agent, CDFG, and CNPS within 90 days of the publication of the Commission Decision. The final plans shall be incorporated into the BRMIMP. At this time, the project owner shall also provide security sufficient to fund the implementation of the plans.

Within 30 days of the start of construction, the project owner shall submit ~~a~~ copy~~y~~ies of the contract with the CPM-approved seed contractor and the check for seed collection and curation fees to the CPM.

The project owner shall identify special-status plant occurrences within 250 feet of the project fence line during the pre-construction plant surveys described above. A qualified botanist shall delineate the boundaries of these special-status plant occurrences at least 30 days prior to the initiation of ground disturbing activities.

On January 31st of each year following construction the project owner's qualified botanist shall submit a report, including CNDDB field survey forms, describing the results of off-site plant surveys for Mojave milkweed and Rusby's desert-mallow to the BLM's authorized officer, the CPM, CDFG, and CNDDB. Submittal of survey reports shall continue for a maximum of 10 years until the same number of occurrences in the project area excluding the occurrences in the Special-Status Plant Projection Areas ~~impacted by the project for Rusby's desert-mallow and Mojave milkweed~~ are identified on these off-site lands ~~as were impacted by the project~~. ~~Similar reports shall be submitted for small-flowered androstephium, desert pincushion, nine-awned pappus grass, and Parish's club-cholla for each of those three species for which 75 percent avoidance was not achieved. For each of the species for which surveys were conducted, the~~ The project owner's qualified botanist shall submit a completion report documenting fulfillment of the target goals and which describe the number of new, previously undiscovered occurrences identified and mapped using GIS techniques for each species. Mapping results shall include GPS coordinates of the plants found.

The Designated Biologist shall maintain written and photographic records of the tasks described above, and summaries of these records shall be submitted along with the Monthly Compliance Reports to the CPM, BLM Authorized Agent, and CDFG. During project operation, the Designated Biologist shall submit record summaries in the Annual Compliance Report for a period not less than 10 years for the Gas Pipeline Revegetation Plan, and for the life of the project for the Special-Status Plant Protection and Monitoring Plan, and the Special-Status Plant Remedial Action Plan, including funding for the seed storage.

No less than 90 days prior to acquisition of the parcel (s) containing or adjacent to a known Mojave milkweed occurrence, the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase.

Draft agreements to delegate land acquisition to CDFG or an approved third party and agreements to manage compensation lands shall be submitted to Energy Commission staff for review and approval (in consultation with CDFG) prior to land acquisition. Such agreements shall be mutually approved and executed at least 60 days prior to start of any project-related ground disturbance activities. The project owner shall provide written verification to the CPM that the compensation lands have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities, the project owner shall provide Security in accordance with this condition. Within 90 days after the land 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, for the compensation lands and associated funds.

STREAMBED IMPACT MINIMIZATION AND COMPENSATION MEASURES

BIO-20 The project owner shall implement the following measures to avoid, minimize and mitigate for impacts to ephemeral drainages:

1. Acquire Off-Site Desert Wash: The project owner shall acquire, in fee or in easement, a parcel or parcels of land that includes ephemeral washes with at least ~~198~~175 acres of state jurisdictional waters. The terms and conditions of this acquisition or easement shall be as described in Condition of Certification **BIO-17** with the additional criteria that the desert wash mitigation lands: 1) include at least ~~198~~175 acres of state jurisdictional waters; 2) be characterized by similar soil permeability, hydrological and biological functions as the impacted drainages; and 3) be within the same watershed as the impacted wash. The desert wash mitigation lands may be included with the desert tortoise mitigation lands ONLY if the above three criteria are met.

2. Security for Implementation of Mitigation: A security in the form of an irrevocable letter of credit, pledged savings account, or certificate of deposit for the amount of all mitigation measures pursuant to this condition of certification shall be submitted to, and approved by, the CPM, in consultation with CDFG, prior to commencing project activities within areas of CDFG jurisdiction. This amount shall be based on a cost estimate which shall be submitted to CDFG for review and to the CPM for approval within

60 days of the Energy Commission Decision's publication and prior to commencing project activities within areas of CDFG jurisdiction. Estimated security for acquisition of compensation lands for state waters is $623,959.The security shall be approved by the CPM, in consultation with CDFG's legal advisors, prior to its execution, and shall allow the CPM at its discretion to recover funds immediately if the CPM, in consultation with CDFG, determines there has been a default.

3. Preparation of Management Plan: The project owner shall 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. No later than 12 months after publication of the Energy Commission Decision the project owner shall submit a final Management Plan for review and approval to the CPM and CDFG.

4. Right of Access and Review for Compliance Monitoring: The CPM reserves the right to enter the project site or allow CDFG to enter the project site at any time to ensure compliance with these conditions. The project owner herein grants to the CPM and to CDFG employees and/or their representatives the right to enter the project site at any time, to ensure compliance with the terms and conditions and/or to determine the impacts of storm events, maintenance activities, or other actions that might affect the restoration and revegetation efforts. The CPM and CDFG may, at the CPM's discretion, review relevant documents maintained by the operator, interview the operator's employees and agents, inspect the work site, and take other actions to assess compliance with or effectiveness of mitigation measures.

5. Notification: The project owner shall notify the CPM and CDFG, in writing, at least five days prior to initiation of project activities in jurisdictional areas as noted and at least five days prior to completion of project activities in jurisdictional areas. The project owner shall notify the CPM and CDFG of any change of conditions to the project, the jurisdictional impacts, or the mitigation efforts, if the conditions at the site of a 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 and CDFG no later than seven days

after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the laws or regulations pertinent to the project as defined below. A copy of the notifying change of conditions report shall be included in the annual reports.

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.

6. Code of Regulations: The project owner shall provide a copy of the Streambed Impact Minimization and Compensation Measures from the Energy Commission Decision 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 or allow CDFG to issue a stop work order after giving notice to the project owner, the CPM, if the CPM in consultation with CDFG, determines that the project owner has breached any of the terms or conditions or for other reasons, including but not limited to the following:

a. The information provided by the applicant regarding streambed alteration is incomplete or inaccurate;

b. New information becomes available that was not known to it in preparing the terms and conditions;

c. The project or project activities as described in the Final Staff Assessment have changed; or

d. The conditions affecting biological resources changed or the CPM, in consultation with CDFG, determines that project activities will result in a substantial adverse effect on the environment.

7. Best Management Practices: The project owner shall also comply with the following conditions:

   a. The project owner shall minimize road building, construction activities and vegetation clearing within ephemeral drainages to the extent feasible.

   b. The project owner shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter ephemeral drainages or be placed in locations that may be subjected to high storm flows.

   c. The project owner shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws, and it shall be the responsibility of the project owner to ensure compliance.

   d. Spoil sites shall not be located within drainages or locations that may be subjected to high storm flows, where spoil shall be washed back into a drainage.

   e. Raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to vegetation or wildlife resources, resulting from project-related activities, shall be prevented from contaminating the soil and/or entering waters of the state. These materials, placed within or where they may enter a drainage or Ivanpah Dry Lake, by project owner or any party working under contract or with the permission of the project owner shall be removed immediately.

   f. No broken concrete, debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete or washings thereof, oil or

petroleum products or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the state.

g. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the high water mark of any drainage.

h. No equipment maintenance shall occur within 150 feet of any ephemeral drainage where petroleum products or other pollutants from the equipment may enter these areas under any flow.

Verification: No less than 90 days prior to acquisition of the parcel (s) containing ~~198~~175 acres of waters of the state, the project owner, or a third-party approved by the CPM, in consultation with CDFG, shall submit a formal acquisition proposal to the CPM and CDFG describing the parcel(s) intended for purchase.

Draft agreements to delegate land acquisition to CDFG or an approved third party and agreements to manage compensation lands shall be submitted to Energy Commission staff for review and approval (in consultation with CDFG) prior to land acquisition. Such agreements shall be mutually approved and executed at least 60 days prior to start of any project-related ground disturbance activities. The project owner shall provide written verification to the CPM that the compensation lands have been acquired and recorded in favor of the approved recipient(s). Alternatively, before beginning project ground-disturbing activities, the project owner shall provide Security in accordance with this condition. Within 90 days after the land 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, for the compensation lands and associated funds.

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 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.

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 *IVANPAH SOLAR ELECTRIC GENERATING SYSTEM*

DOCKET NO. 07-AFC-5
PROOF OF SERVICE
(Revised 11/23/09)

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DECLARATION OF SERVICE

I, Sabrina Savala, declare that on July 30, 2010, I served and filed copies of the attached, CEC Staff"s Transmittal of Updated Renewable Energy Action Team Agency Guidance for Mitigation Cost Estimates and Dessert Tortoise Translocation, dated July 30, 2010. 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/ivanpah].

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;

__x__ 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. 07-AFC-5
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.

Originally Signed by:
Sabrina Savala

*indicates change