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PALMDALE ENERGY PROJECT CONDITIONS OF CERTIFICATION COMPENDIUM

AIR QUALITY CONDITIONS OF CERTIFICATION

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 **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 60 days prior to the start of ground disturbance, including project-related mitigation such as road paving, 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. The AQCMM and all Delegates must be approved by the CPM before the start of ground disturbance.

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 **AQ-SC3**, **AQ-SC4**, **AQ-SC5**, **AQ-SC6**, **AQ-SC7** and **AQ-SC8.** The AQCMP shall include a Monthly Compliance Report (MCR). The project owner shall provide a MCR during construction and commissioning including information necessary to demonstrate compliance with the conditions of certification.

Verification: At least 60 days prior to the start of any ground disturbance, the project owner shall submit the AQCMP to the CPM and Antelope Valley Air Quality Management District (District) for approval. The CPM will notify the project owner of any necessary modifications to the plan within 30 days from the date of receipt. The AQCP must be approved by the CPM before the start of ground disturbance. The project owner shall submit the MCR to the CPM and District if requested by the District no later than 30 days following the end of each calendar month.

AQ-SC3 Construction Fugitive Dust Control: The AQCMM shall submit documentation to the CPM in each Monthly Compliance Report (MCR) that demonstrates compliance with the following mitigation measures for the purposes of minimizing fugitive dust emissions created from construction activities and preventing all fugitive dust plumes from leaving the project site and linear facility routes. Any deviation from the following mitigation measures shall require prior CPM notification and approval.

A. (Deleted)

B. All disturbed areas in the project and linear construction sites shall be watered as frequently as necessary 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 shall be provided with sandbags or other similar measures as specified in the Storm Water Pollution Prevention Plan (SWPP) to prevent run-off to roadways.

J. All paved roads within the construction site shall be swept at least twice daily (or 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 at least twice daily (or 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 covered, or the materials shall be sufficiently wetted and loaded onto the trucks in a manner to minimize fugitive dust emissions. A minimum freeboard height of two feet will be required on al bulk materials transport.

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.

O. Disturbed areas will be re-vegetated as soon as practical.

Verification: The AQCMM shall include in the MCR:

1. A summary of all actions taken to maintain compliance with this condition;

2. Copies of any complaints filed with the District in relation to project construction; and

3. Any other documentation deemed necessary by the CPM, District 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 Delegate shall monitor all construction activities for visible dust plumes. Observations of visible dust plumes that have the potential to be transported: (1) off the project site, (2) 200 feet beyond the centerline of the construction of linear facilities, or (3) within 100 feet upwind of any regularly occupied structures not owned by the project owner 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, provided that 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 MCR to include:

1. A summary of all actions taken to maintain compliance with this condition;

2. Copies of any complaints filed with the District in relation to project construction; and

3. 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 MCR, a construction mitigation report that demonstrates compliance with the following mitigation measures for purposes of controlling diesel construction-related emissions. 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 4 or 4i 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. This good faith effort shall be documented with signed written correspondence by the appropriate construction contractors along with documented correspondence with at least two construction equipment rental firms. In the event that a Tier 4 or 4i engine is not available for any off-road equipment larger than 50 hp, that equipment shall be equipped with a Tier 3 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 3 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 3 equivalent emission levels and the highest level of available control using retrofit or Tier 2 engines is being used for the engine in question; or

2. The construction equipment is intended to be on site for 5 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 five 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 a table in the MCR the following to demonstrate control of diesel construction-related emissions:

1. A summary of all actions taken to maintain compliance with this condition,

2. 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

3. Any other documentation deemed necessary by the CPM and 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 shall submit to the CPM Quarterly Operation Reports, following the end of each calendar quarter that include operational and emissions information as necessary to demonstrate compliance with the Conditions of Certification herein. The Quarterly Operation Report shall specifically state that the facility meets all applicable Conditions of

Certification or note or highlight all incidences of noncompliance. Annual operation reports shall be submitted as part of the fourth Quarterly Report.

Verification: The project owner shall submit the Quarterly Operation Reports to the CPM and District, if requested by the District, no later than 30 days following the end of each calendar quarter.

AQ-SC7 The project owner shall provide the CPM copies of any District issued Authority-to-Construct (ATC) and Permit-to-Operate (PTO) 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 air permit. The project owner shall submit to the CPM any modification to any permit proposed by the District or U.S. EPA, and any revised permit issued by the District or U.S. EPA, for the project.

Verification: The project owner shall submit any ATC, PTO, and any proposed air permit modification to the CPM within five 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 air permits to the CPM within 15 days of receipt.

AQ-SC8 The project owner shall provide mitigation in the form of offsets or emission reduction credits (ERCs) prior to the start of construction of the project. The project emissions of 138.99 tons per year of NOx and 51.65 tons per year of VOC shall be offset at a ratio of 1.3 to one for ERC's within the Mojave Desert Air Basin and 1.5 to one for ERC's from the southern San Joaquin Valley Air Basin. The project owner shall provide a total of 180.7 tons per year of NOx and 77.5 tons per year of VOC mitigation. The project owner shall demonstrate that the reductions are provided in the form required by the District and U.S. EPA.

The project owner shall provide ERCs from the following list:

- MDAQMD: ERC Certificate 102
- MDAQMD: ERC Certificate 103
- SJVAPCD: ERC Certificate S-4039-1
- SJVAPCD: ERC Certificate S-3387-1
- SJVAPCD: ERC Certificate S-3261-1
- SJVAPCD: ERC Certificate S-3442

The project owner shall surrender the ERCs as required by the District. The project owner shall request District, U.S. EPA, ARB and CPM approval for any substitutions, modifications, or additions to the ERCs.

The CPM, in consultation with the District, U.S. EPA and ARB, may approve any such change to the ERC list provided that the project remains in compliance with all applicable laws, ordinances, regulations, and standards, and that the requested change(s) will not cause the project to result in a

significant environmental impact. The District must also confirm that each requested change is consistent with applicable federal and state laws and regulations

Verification: The project owner shall submit to the CPM a copy of all ERCs to be surrendered to the District at least 60 days prior to start construction. Construction shall not begin until the CPM has approved all ERCS. This approval shall be done in consultation with the District. If a substitution or modification to the list of ERCs is approved by the CPM. District and U.S. EPA, the CPM shall file a statement of the approval with the project owner and Energy Commission docket. The CPM shall maintain an updated list of approved ERCs for the project.

AQ-SC9 The project owner shall provide 92.4 tons per year of PM10 ERCs 81.0 tons per year for PM10 emissions and 11.39 tons per year for PM10-precursor SOx emissions) that are banked consistent with the Rules and Regulations of the District. The project owner shall pave unpaved local roads to provide emission reductions of 137 tons per year of PM10 prior to the start of construction of the project. The project owner shall complete the road paving according to the revised Paved ERC Data Collection Protocol included as Air Quality Appendix Air-2 to the Final Staff Assessment. Calculations of PM10 emission reduction credits shall be performed in accordance with the ERC Data Collection Protocol.

Verification: At least 45 days prior to start of construction, the project owner shall submit documentation showing that the project has obtained 92.4 tons of banked PM10 ERCs. Construction shall not begin until the CPM has approved all ERCs. This approval shall be done in consultation with the District.

AQ-SC10 The project owner shall minimize emissions associated with the simultaneous commissioning of the combustion turbines and not exceed NOx emissions of 254 pounds per hour.

Verification: The project owner shall provide operating records in the MCR to document compliance with this condition.

AQ-SC11 The project owner shall comply with all staff (AQ SC) and district (AQ) Conditions of Certification. The CPM, in consultation with the District, may approve any change to a condition of certification regarding air quality, as a staff approved modification, provided that: (1) the Project remains in compliance with all applicable laws, ordinances, regulations, and standards, (2) the requested change clearly will not cause the Project to result in a significant environmental impact, (3) no additional mitigation or offsets will be required as a result of the change, (4) no existing daily, quarterly, or annual permit limit will be exceeded as a result of the change, and (5) no increase in any daily, quarterly, or annual permit limit will be necessary as a result of the change.

Verification: The project owner shall submit a petition to amend for any proposed change to a condition of certification pursuant to this condition and shall provide the CPM with any additional information the CPM requests to substantiate the basis for approval.

DISTRICT'S PERMIT CONDITIONS

Combustion Turbine Generator Power Block Conditions

[2 individual 2,467 MMBtu/hr F Class Gas Combustion Turbine Generators, Application Numbers: AV2000000504 and AV2000000505]

AQT-1 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQT-2 This equipment shall be exclusively fueled with pipeline quality natural gas with a sulfur content not exceeding 0.2 grains per 100 dry standard cubic feet (dscf) on a rolling twelve month average basis, and shall be operated and maintained in accordance with the recommendations of its manufacturer or supplier and/or sound engineering principles. Compliance with this limit shall be demonstrated by providing evidence of a contract, tariff sheet or other approved documentation that shows that the fuel meets the definition of pipeline quality gas and records of monthly fuel sulfur content. [Rule 1303; Rule 431.1; 40 CFR 60.4365; 40 CFR 60.5520(d)(1)].

Verification: The project owner shall complete, or obtain from the fuel supplier, on a monthly basis, a laboratory analysis showing the sulfur content of natural gas being burned at the facility. The sulfur analysis reports shall be incorporated into the quarterly compliance reports.

AQT-3 This equipment is subject to the Federal NSPS codified at 40 CFR Part 60, Subparts A (General Provisions) and KKKK (Standards of Performance for New Stationary Gas Turbines), and TTTT (Standards of Performance for Greenhouse Gas Emission from New Stationary Gas Turbines). This facility is also subject to the Prevention of Significant Deterioration (40 CFR 52.21) and Federal Acid Rain (Title IV) programs. Compliance with all applicable provisions of these regulations is required.

Verification: The project owner shall provide the District, the ARB and the CPM copies of the federal PSD and Acid Rain permits no later than 30 days after their issuance.

AQT-4 Emissions from this equipment (including its associated duct burner) shall not exceed the following emission limits at any firing rate, except for CO, NOx and VOC during periods of startup and shutdown:

a. Hourly rates, computed every 15 minutes, verified by CEMS and annual compliance tests:

i. NOx as NO_2 – 2.0 ppmvd corrected to 15 percent O_2 and 18.50 lb/hr,

based on a 1-hr average

ii. CO – 2.0 ppmvd corrected to 15 percent O_2 and 11.30 lb/hr, based on a 1-hr average

b. Hourly rates, verified by compliance tests or other compliance methods in the case of SOx:

i. VOC as CH_4 – 2.0 ppmvd corrected to 15 percent O2 and 6.36 lb/hr

ii. SOx as SO_2 – 5.63 lb/hr (based on 0.75 grains/100 dscf fuel sulfur)

iii. PM10/2.5 – 11.80 lb/hr

Emissions from this equipment (not including the associated duct burner) shall not exceed the following emission limits at any firing rate, except for CO, NOx and VOC during periods of startup and shutdown.

c. Hourly rates, computed every 15 minutes, verified by CEMS and annual compliance tests:

i. NOx as NO_2 – 2.0 ppmvd corrected to 15 percent O2 and 17.10 lb/hr averaged over one hour

ii. CO – 2.0 ppmvd corrected to 15 percent O2 and 10.40 lb/hr, averaged over one hour

d. Hourly rates, verified by compliance tests or other compliance methods in the case of SOx:

i. VOC as CH_4 – 1 ppmvd corrected to 15 percent O2 and 3.00 lb/hr

ii. SOx as SO_2 – 5.25 lb/hr (based on 0.75 grains/100 dscf fuel sulfur)

iii. PM10/2.5 – 9.80 lb/hr

[Rule 404; Rule 407; Rule 409; Rule 475; Rule 1134; Rule 1303; NSPS Subpart KKKK]

Verification: The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by **AQ-SC6.**

AQT-5 Emissions of CO and NOx from this equipment shall only exceed the limits contained in Condition **AQT-4** during startup and shutdown periods as follows. Transient conditions shall not exceed the following durations:

a. Cold Startup – A gas turbine (GT) startup (SU) that occurs when the steam turbine (ST) rotor temperature is less than 485˚F after a GT shutdown (SD), and is limited in time to the lesser of:

i. the first 39 minutes of continuous fuel flow to the GT after ignition; or

ii. the period of time from GT ignition until the GT achieves the first of two consecutive CEM data points in compliance with the emission concentration limits of Parts 4(a) and 4(b).

b. Warm Startup – A GT SU that occurs when the ST rotor temperature is greater than or equal to 485˚F but less than 685˚F after a GT SD, and is limited in time to the lesser of:

i. the first 35 minutes of continuous fuel flow to the GT after ignition; or

ii. the period of time from GT ignition until the GT achieves the first of two consecutive CEM data points in compliance with the emission concentration limits of Parts 4(a) and 4(b).

c. Hot Startup – A GT startup (SU) that occurs when the ST rotor temperature is greater than or equal to 685˚F after a GT SD, and is limited in time to the lesser of:

i. the first 30 minutes of continuous fuel flow to the GT after ignition; or

ii. the period of time from GT ignition until the GT achieves the first of two consecutive CEM data points in compliance with the emission concentration limits of Parts 4(a) and 4(b).

d. Shutdown – The lesser of the 25-minute period immediately prior to the termination of fuel flow to the GT or the period of time from non-compliance with any requirements listed in Parts 4(a) and 4(b) until termination of fuel flow to the GT.

e. During a cold startup emissions shall not exceed the following, verified by CEMS:

i. NOx – 52 lb

ii. CO – 416 lb

f. During a warm startup emissions shall not exceed the following, verified by CEMS:

i. NOx – 47 lb

ii. CO – 378 lb

g. During a hot startup emissions shall not exceed the following, verified by CEMS:

i. NOx – 43 lb

ii. CO – 305 lb

iii.

h. During a shutdown emissions shall not exceed the following, verified by CEMS:

i. NOx – 33 lb

ii. CO – 76 lb

[Rule 1303]

Verification: The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by **AQ-SC6**.

AQT-6 Emissions (including startup, shutdown, and malfunction) from this facility, including the duct burner, auxiliary equipment, and engines, shall not exceed the following emission limits, based on a calendar day summary:

a. NOx – 1,141 lb/day, verified by the turbine CEMS

b. CO – 2,179 lb/day, verified by the turbine CEMS

c. VOC as CH_4 – 472 lb/day, verified by compliance tests, fuel use data, and hours of operation in mode

d. SOx as SO_2 – 271 lb/day, verified by fuel sulfur content and fuel use data

e. PM10/2.5 – 568 lb/day, verified by compliance tests, fuel use data, and hours of operation

[Rule 1303]

Verification: The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by **AQ-SC6**.

AQT-7 Emissions from this facility, including the duct burner, auxiliary boiler, and engines, shall not exceed the following emission limits, based on a rolling 12 month summary:

a. NOx – 138.99 tons/year, verified by CEMS

b. CO – 351.09 tons/year, verified by CEMS

c. VOC as CH_4 – 51.65 tons/year, verified by compliance tests, fuel use data, and hours of operation in mode

d. SOx as SO_2 – 11.39 tons/year, verified by fuel sulfur content and fuel use data

e. PM10 – 81.01 tons/year, verified by compliance tests, fuel use data and hours of operation

f. PM2.5 – 81.01 tons/year, verified by compliance tests, fuel use data and hours of operation

[Rule 1303]

Verification: The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by **AQ-SC6**.

AQT-8 Particulate emissions from this equipment shall not exceed an opacity equal to or greater than 20 percent for a period aggregating more than three (3) minutes in any one (1) hour, excluding uncombined water vapor

[Rule 401]

Verification: The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by AQ-SC6.

AQT-9 This equipment shall exhaust through a stack at a minimum height of 160 feet.

[Rule 1303]

Verification: At least 60 days prior to construction of the turbine stacks, the project owner shall provide the District and CPM an "approved for construction" drawing showing the appropriate stack height and location of sampling ports and platforms. The project owner shall make the site available to the District, U.S. EPA and the CPM for inspection.

AQT-10 The project owner shall not operate this equipment after the initial commissioning period without the oxidation catalyst with a valid District permit and the selective catalytic reduction system with a valid District permit installed.

[Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall provide information on any major problem in the operation of the oxidizing catalyst and SCR Systems for the gas turbines and HRSGs. The information shall include, at a minimum, the date and description of the problem and the steps taken to resolve the problem.

AQT-11 The project owner shall provide stack sampling ports and platforms necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.

[Rule 1303]

Verification: At least 60 days prior to construction of the turbine stacks, the project owner shall provide the District and CPM an "approved for construction" drawing showing the appropriate stack height and location of sampling ports and platforms. The project owner shall make the site available to the District, U.S. EPA and Energy Commission Staff for inspection.

AQT-12 Emissions of NOx and CO, and oxygen and shall be monitored using a Continuous Emissions Monitoring System (CEMS). Ammonia slip shall be monitored using a Parametric Emissions Monitoring System (PEMS). Turbine fuel consumption shall be monitored using a continuous monitoring system. Stack gas flow rate shall be monitored using either a Continuous Emission Rate Monitoring System (CERMS) meeting the requirements of 40 CFR 75

Appendix A or a stack flow rate calculation method. The project owner shall install, calibrate, maintain, and operate these monitoring systems according to a District-approved monitoring plan District Rule 218, 40 CFR 60 and/or 40 CFR 75[1] as applicable. [Rule 1134; Rule 1303; NSPS KKKK]

Verification: The project owner shall install, calibrate, maintain, and operate these monitoring systems according to a District-approved monitoring plan and District Rule 218, and they shall be installed prior to initial equipment startup after initial steam blows are completed. Two (2) months prior to installation the operator shall submit a monitoring plan for District and CPM review and approval.

AQT-13 The project owner shall conduct all required compliance/certification tests in accordance with a District-approved test plan. Thirty (30) days prior to the compliance/certification tests the operator shall provide a written test plan for District review and approval. Written notice of the compliance/certification test shall be provided to the District ten (10) days prior to the tests so that an observer may be present. A written report with the results of such compliance/certification tests shall be submitted to the District within forty-five (45) days after testing. [District Compliance Test Procedural Manual; Rule 1303; Rule 1134]

Verification: The project owner shall notify the District and the CPM within ten (10) working days before the execution of the compliance/certification tests required in this condition. Compliance/certification test results shall be submitted to the District and to the CPM within 45 days of the date of the tests.

AQT-14 After the initial compliance test, the project owner shall perform the following compliance tests at least as often as once every three years on this equipment in accordance with the District Compliance Test Procedural Manual. The test report shall be submitted to the District no later than six weeks prior to the expiration date of this permit. The following compliance tests are required:

a. NOx as NO_2 in ppmvd at 15 percent oxygen and lb/hr (measured per USEPA Reference Methods 19 and 20).

b. VOC as CH_4 in ppmvd at 15 percent oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18).

c. SOx as SO_2 in ppmvd at 15 percent oxygen and lb/hr (measured per USEPA Reference Method 6 or 6C or equivalent).

d. CO in ppmvd at 15 percent oxygen and lb/hr (measured per USEPA Reference Method 10).

e. PM10 and PM2.5 in mg/m^3 at 15 percent oxygen and lb/hr (measured per USEPA Reference Methods 5 and 202 or CARB Method 5).

f. Flue gas flow rate in dscf per minute (measured per USEPA Method 2B).

[1] Where 40 CFR 60 and 40 CFR 75 are applicable but inconsistent, 40 CFR 60 shall take precedent.

g. Opacity (measured per USEPA reference Method 9).

h. Ammonia slip in ppmvd at 15 percent oxygen. (measured per BAAQMD ST-1B)

[Rule 1134; Rule 1303]

Verification: The project owner shall notify the District and the CPM within ten 10 working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

AQT-15 The project owner shall, at least as often as once every three years following planned facility outages (commencing with the initial compliance test), include the following supplemental source tests:

a. Characterization of cold startup VOC emissions;

b. Characterization of other startup VOC emissions; and

c. Characterization of shutdown VOC emissions.

[Rule 1303]

Verification: The project owner shall notify the District and the CPM within ten (10) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

AQT-16 Continuous monitoring systems shall meet the following acceptability testing requirements from 40 CFR 60 Appendix B (or otherwise District approved):

a. For NOx, .40 CFR 75.

b. For O_2, Performance Specification 3.

c. For CO, Performance Specification 4.

d. For stack gas flow rate, 40 CFR 75.

e. For ammonia, a District approved procedure that is to be submitted by the project owner.

f. For stack gas flow rate (without CERMS), a District approved procedure that is to be submitted by the project owner.

[Rule 218; Rule 1134]

Verification: The project owner shall install, calibrate, maintain, and operate these monitoring systems according to a District-approved monitoring plan and Distract Rule 218, and they shall be installed prior to initial equipment startup after initial steam blows are completed. Sixty (60) days prior to installation, the operator shall submit a

monitoring plan for District and CPM for review and approval.

AQT-17 The project owner shall submit to the APCO and USEPA Region IX the following information for the preceding calendar quarter by January 30, April 30, July 30 and October 30 of each year this permit is in effect. Each January 30 submittal shall include a summary of the reported information for the previous year. This information shall be maintained on site and current for a minimum of five (5) years and shall be provided to District personnel on request:

a. Operating parameters of emission control equipment, including but not limited to ammonia injection rate, NOx emission rate and ammonia slip.

b. Total plant operation time (hours), duct burner operation time (hours), number of startups, hours in cold startup, hours in other startup, and hours in shutdown.

c. Date and time of the beginning and end of each startup and shutdown period.

d. Average plant operation schedule (hours per day, days per week, weeks per year).

e. All continuous emissions data reduced and reported in accordance with the District approved CEMS protocol.

f. Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10, PM2.5, VOC and SOx (including calculation protocol).

g. Fuel sulfur content (monthly laboratory analyses, monthly natural gas sulfur content reports from the natural gas supplier(s), or the results of a custom fuel monitoring schedule approved by U.S. EPA for compliance with the fuel monitoring provisions of 40 CFR 60 Subpart KKKK and 40 CFR Part 72 as applicable)

h. A log of all excess emissions, including the information regarding malfunctions/breakdowns required by Rule 430.

i. Any permanent changes made in the plant process or production which would affect air pollutant emissions, and indicate when changes were made.

j. Any maintenance to any air pollutant control system (recorded on an as-performed basis).

k. Records of steam turbine rotor temperature.

[Rule 1303; Subpart KKKK; Rule 431.1; Rule 430; Rule 1134]

Verification: The project owner shall prepare quarterly reports for the preceding calendar quarters by January 30, April 30, July 30 and October 30 with the January 30 report including an annual summary. The reports shall be submitted to the District, U.S. EPA and the CPM.

AQT-18 The project owner must surrender to the District sufficient valid Emission Reduction Credits for this equipment before the start of construction of any part of the project for which this equipment is intended to be used. In accordance with Regulation XIII, the operator shall obtain 180.7 tons of NOx, 77.5 tons of VOC, and 81.0 tons of PM10 offsets. [Rule 1303(B); Rule 1305; Rule 1309]

Verification: The project owner shall submit to the CPM for approval a copy of all ERCs to be surrendered to the District at least 60 days prior to start construction. Construction shall not begin prior to CPM approval of the ERCs.

AQT-19 During an initial commissioning period of no more than 180 days, commencing with the first firing of fuel in this equipment, NOx, CO, VOC and ammonia concentration limits shall not apply. The project owner shall minimize emission of NOx, CO, VOC and ammonia to the maximum extent possible during the initial commissioning period.

[Rule 1303]

Verification: The project owner shall submit a MCR to the CPM specifying how this condition is being complied with. In addition, the project owner shall provide evidence of the District's approval of the emission monitoring system to the CPM prior to first firing of the gas turbines.

AQT-20 The project owner shall tune each CTG and HRSG to minimize emissions of criteria pollutants at the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor.

[Rule 1303]

Verification: The project owner shall submit a MCR to the CPM specifying how this condition is being complied with. In addition, the project owner shall provide evidence of the District's approval of the emission monitoring system to the CPM prior to first firing of the gas turbines.

AQT-21 The project owner shall install, adjust and operate each SCR system to minimize emissions of NOx from the CTG and HRSG at the earliest feasible opportunity in accordance with the recommendations of the equipment manufacturers and the construction contractor. The NOx and ammonia concentration limits of condition AQT-4 above and condition AQSCR-4 below (SCR conditions) shall apply coincident with the steady state operation of the SCR systems.

[Rule 1303]

Verification: The project owner shall submit a MCR to the CPM specifying how this condition is being complied with. In addition, the project owner shall provide evidence of the District's approval of the emission monitoring system to the CPM prior to first firing of the gas turbines.

AQT-22 The project owner shall submit a commissioning plan to the District and the Energy Commission at least four weeks prior to the first firing of fuel in this equipment. The commissioning plan shall describe the procedures to be followed during the commissioning of the CTGs, HRSGs and steam turbine. The commissioning plan shall include a description of each commissioning activity, the anticipated duration of each activity in hours, and the purpose of the activity. The activities described shall include, but not be limited to, the tuning of the dry low NOx combustors, the installation and testing of the CEMS, and any activities requiring the firing of the CTGs and HRSGs without abatement by an SCR system.

[Rule 1303]

Verification: The project owner shall submit a MCR to the CPM specifying how this condition is being complied with.

AQT-23 The total number of firing hours of each CTG and HRSG without abatement of NOx by the SCR shall not exceed 639 hours during the initial commissioning period. Such operation without NOx abatement shall be limited to discrete commissioning activities that can only be properly executed without the SCR system in place and operating. Upon completion of these activities, the project owner shall provide written notice to the District and CEC and the unused balance of the unabated firing hours shall expire.

[Rule 1303]

Verification: The project owner shall submit a MCR to the CPM specifying how this condition is being complied with.

AQT-24 During the initial commissioning period, emissions from this facility shall not exceed the following emission limits (verified by PEMS):

a. NOx - 30 tons, and 132 pounds/hour/CTG

b. CO - 185 tons, and 4,500 pounds/hour/CTG

[Rule 1303]

Verification: The project owner shall submit a MCR to the CPM specifying how this condition is being complied with.

AQT-25 No later than 180 days after initial startup, the project owner shall perform an initial compliance test. This test shall demonstrate that this equipment is capable of operation at 100 percent load in compliance with the emission limits in Condition AQT-4.

[Rule 1303]

Verification: No later than 30 working days before the commencement of the initial compliance tests, the project owner shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. The project owner shall incorporate the District and CPM comments into the test plan. The project owner shall notify the District and the CPM at least ten (10) working days prior to the planned source testing date. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

AQT-26 The initial compliance test shall include tests for the following. The results of the initial compliance test shall be used to prepare a supplemental health risk analysis if required by the District:

a. Formaldehyde;

b. Certification of CEMS, PEMS, and CERMS (or stack gas flow calculation method) at 100 percent load, startup modes and shutdown mode;

c. Characterization of cold startup VOC emissions;

d. Characterization of other startup VOC emissions; and

e. Characterization of shutdown VOC emissions.

[Rule 1303]

Verification: No later than 30 working days before the commencement of the initial compliance tests, the project owner shall submit to the District and the CPM a detailed source test plan designed to satisfy the requirements of this condition. Source test results shall be submitted to the District and the CPM within 60 days of the source testing date.

AQT-27 This equipment is subject to 40 CFR 60 Subpart TTTT – Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units. Carbon dioxide emissions from this turbine shall not exceed 1,000 lb CO_2/MWh (gross) or 1,030 lb CO_2/MWh (net). [40 CFR 60 Subpart TTTT §60.5520]

Verification: The project owner shall submit to the CPM for approval all emissions and emission calculations to demonstrate compliance with this condition as part of the 4th quarter operational report.

HRSG Duct Burner Conditions

[2 individual 193.1 MMBtu/hr Natural Gas Duct Burners, Application Numbers: AV2000000512 and AV2000000513]

AQDB-1 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQDB-2 This equipment shall be exclusively fueled with natural gas and shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

[Rule 431.1; Rule 1303]

Verification: The project owner shall complete, on a monthly basis, a laboratory analysis showing the sulfur content of natural gas being burned at the facility. The sulfur analysis reports shall be incorporated into the quarterly compliance reports.

AQDB-3 The duct burner shall not be operated unless the combustion turbine generator with a valid District permit, catalytic oxidation system with a valid District permit, and selective catalytic NOx reduction system with a valid District permit are in operation.[2]

[Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQDB-4 This equipment shall not be operated for more than 1,500 hours per rolling twelve month period.

[Rule 1303]

Verification: The project owner shall submit to the CPM the hours of duct burner operation on a rolling twelve month basis in the quarterly and annual compliance reports as required by **AQ-SC6**.

AQDB-5 Monthly hours of operation for this equipment shall be recorded and maintained on site for a minimum of five (5) years and shall be provided to District personnel on request.

[Rule 1303]

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA and CPM.

Oxidation Catalyst System Conditions

[2 individual oxidation catalyst systems, Application Numbers: AV2000000506 and AV2000000507]

AQOC-1 Operation of this equipment shall be conducted in compliance with all data

[2] All permit numbers are yet to be assigned.

and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQOC-2 This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQOC-3 This equipment shall be operated concurrently with the combustion turbine generator with a valid District permit[3] [Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

Selective Catalytic Reduction System Conditions

[2 individual SCR systems, Application Numbers: AV2000000508 and AV2000000509]

AQSCR-1 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQSCR-2 This equipment shall be operated and maintained in strict accord with the recommendations of its manufacturer or supplier and/or sound engineering principles.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

[3] As represented in the FDOC; permit number to be assigned.

AQSCR-3 This equipment shall be operated concurrently with the combustion turbine generator with a valid District permit.[4] [Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

[Rule 204]

AQSCR-4 Ammonia shall be injected whenever the selective catalytic reduction system has reached or exceeded 400 degrees Fahrenheit except for periods of equipment malfunction.

[Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQSCR-5 Except during periods of startup and shutdown, ammonia slip shall not exceed 5 ppmvd averaged over one hour at 15 percent O_2 dry. The project owner shall calculate and continuously record the NH_3 slip concentration using the following:

NH_3 (ppmv) = [a-b*(c*1.2)/1E6]*1E6/b; where:

a = NH3 injection rater (lb/hr)/17(lb/lbmol)

b = dry exhaust gas flow rate (scf/hr)/385.3 (scf/lbmol)

c = change in measured NOx across the SCR, ppmvd at 15 percent O_2

The project owner shall install a NOx analyzer to measure the SCR inlet NOx ppm accurate to within +/- 5 percent calibrated at least once every 12 months.

The project owner shall use the method described above or another alternative method approved by the APCO.

The ammonia slip calculation procedures described above shall not be used for compliance determination or emission information determination without corroborative data using an approved reference method for the determination of ammonia.

[Rule 1303]

Verification: The project owner shall include ammonia slip concentrations averages on an hourly basis as part of the Quarterly Operation Report. The project owner shall submit all SCR inlet NOx analyzer calibration results to the CPM within 60 days of the calibration date. Exceedances of the ammonia limit shall be reported and chronic exceedances of the ammonia slip limit, defined as occurring more than 10 percent of

[4] As represented in the FDOC; permit number to be assigned.

the operation for any single HRSG exhaust stack, shall be identified by the project owner and confirmed by the CPM within 60 days of the submitted Quarterly Operation Report that indicates chronic exceedances. If a chronic exceedance is identified and confirmed, the project owner shall work in conjunction with the CPM to develop a reasonable compliance plan to investigate and redress the chronic exceedance of the ammonia slip limit within 60 days of the above confirmation.

AQSCR-6 The project owner shall record and maintain for this equipment the following on site for a minimum of five (5) years and shall be provided to District personnel upon request.

a. Ammonia injection, in pounds per hour
b. Temperature, in degrees Fahrenheit at the inlet to the SCR.

[Rule 1303]

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA and CPM.

Auxiliary Boiler Conditions

[One 110 MMBtu/hr Gas Fired Auxiliary Boiler, Application Number: AV000000503]

AQAB-1 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQAB-2 This equipment shall be exclusively fueled with pipeline quality natural gas and shall be operated and maintained in accordance with the recommendations of its manufacturer or supplier and/or sound engineering principles. [Rule 431.1; Rule 1303(A); 40 CFR 60 Subpart Db]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQAB-3 This equipment is subject to the Federal NSPS codified at 40 CFR Part 60, Subparts A (General Provisions) and Db (Industrial-Commercial-Institutional Steam Generating Units).

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQAB-4 Emissions from this equipment shall not exceed the following hourly emission

limits at any firing rate, verified by fuel use and annual compliance tests:

a. NOx as NO_2 – 9.0 ppmvd corrected to 3 percent O_2, 0.011 lbs/MMBtu, and 1.21 lb/hr (averaged over one hour)

b. CO – 50 ppmvd corrected to 3 percent O_2, 0.037 lbs/MMBtu, and 4.07 lb/hr (averaged over one hour)

c. VOC as CH_4 – 0.066 lbs/MMBtu and 0.66 lb/hr

d. SOx as SO_2 – 0.0022 lbs/MMBtu and 0.25 lb/hr (based on 0.75 grains/100 dscf fuel sulfur)

e. PM10/2.5 – 0.007 lbs/MMBtu and 0.77 lb/hr (front and back half)

[Rule 404; Rule 407; Rule 409; Rule 475; Rule 476; Rule 1303(A); 40 CFR 60.44b]

Verification: The project owner shall submit operating hour data to the District and CPM the quarterly and annual compliance reports as required by AQ-SC6.

AQAB-5 This equipment shall not be operated for more than 4,884 hours per rolling twelve month period.

[Rule 1303]

Verification: The project owner shall submit to the District and CPM the quarterly and annual compliance reports as required by AQ-SC6.

AQAB-6 The project owner shall maintain an operations log for this equipment on-site and current for a minimum of five (5) years, and said log shall be provided to District personnel on request. The operations log shall include the following information at a minimum:

a. Total operation time (hours per month, by month);

b. Daily Fuel use (to be used for calculating annual (12 month rolling sum) capacity factor;

c. Maximum hourly, maximum daily, total quarterly, and total calendar year emissions of NOx, CO, PM10/2.5, VOC and SOx (including calculation protocol); and,

d. Any permanent changes made to the equipment that would affect air pollutant emissions, and indicate when changes were made.

[Fuel Sulfur Monitoring- 40 CFR 60.42(b)(k)(2); 40 CFR 60.49b(r)(1)]

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, EPA and CPM.

AQAB-7 The project owner shall perform the following annual compliance tests on this equipment in accordance with the District Compliance Test Procedural Manual. The test report shall be submitted to the District no later than six weeks prior to the expiration date of this permit. The following compliance tests are required:

a. NOx as NO_2 in ppmvd at 3 percent oxygen and lb/hr (measured per USEPA Reference Methods 19 and 20).

b. VOC as CH_4 in ppmvd at 3 percent oxygen and lb/hr (measured per USEPA Reference Methods 25A and 18).

c. SOx as SO_2 in ppmvd at 3 percent oxygen and lb/hr (measured per USEPA Reference Method 6 or 6C).

d. CO in ppmvd at 3 percent oxygen and lb/hr (measured per USEPA Reference Method 10).

e. PM10 and PM2.5 in mg/m3 at 3 percent oxygen and lb/hr (measured per USEPA Reference Methods 5 and 202 or CARB Method 5).

f. Flue gas flow rate in dscf per minute (measured per USEPA Method 2B or F Factor).

g. Opacity (measured per USEPA reference Method 9) Initial test only

[40 CFR 60.44b(l) and 60.46b(c)(e)(g); Rule 1303]

Verification: The project owner shall notify the District and the CPM within seven (7) working days before the execution of the source tests required in this condition. Source test results shall be submitted to the District and to the CPM within 60 days of the date of the tests.

AQAB-8 A non-resettable four-digit (9,999) hour timer shall be installed and maintained on this unit to indicate elapsed operating time. [Rule 1303]

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

AQAB-9 The equipment shall exhaust through a stack at a minimum height of 60.5 feet.

[Rule 1303]

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

AQAB-10 The project owner shall continuously monitor and record fuel flow rate and flue gas oxygen level. [40 CFR 60 Subpart Db, Section 60.49b; Reporting and Recordkeeping Requirements]

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

AQAB-11 In lieu of installing CEMs to monitor NOx emissions, and pursuant to 40 CFR 60 Subpart Db, Section 60.49b(c), the project owner shall monitor boiler operating conditions and estimate NOx emission rates per a District approved emissions estimation plan. The plan shall be based on the annual source tests required by Condition AQAB-7. The plan shall include test results, operating parameters, analysis, conclusions and a proposed NOx estimating relationship consistent with established emission chemistry and operational effects. Any proposed changes to a District-approved plan shall include subsequent test results, operating parameters, analysis and any other pertinent information to support the proposed changes. The District and CPM must approve any emissions estimation plan or revision for estimated NOx emissions to be considered valid. [40 CFR 60 Subpart Db, Section 60.49b(c)]

Verification: The project owner shall submit the emission estimation plan to the CPM for approval within 60 days of the initial source test.

Emergency Generator Conditions

[One 2,011 hp emergency IC engine driving a generator, Application Number: AV2000000502]

AQEG-1 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQEG-2 This stationary certified EPA Tier 2 diesel IC engine shall be installed, operated and maintained in accordance with the recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants.

[Rule 1303; NSPS IIII]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQEG-3 This unit shall be limited to use for emergency power, defined in 17 CCR 93115. In addition, this unit may be operated as part of a testing program that does not exceed 0.5 hours in any one day and not more than 26 hours of testing or maintenance per year (rolling 12 month sum). Furthermore, pursuant to District Rule 1110.2, this unit shall be operated less than 200 hours per calendar year. This requirement includes usage during emergencies.

[Rule 1302; 17 CCR 93115; NSPS IIII]

Verification: As part of the quarterly and annual compliance reports, the project owner shall submit all dates of operation, elapsed time in hours, the reason for each operation, and the annual maintenance per year (rolling 12-month sum).

AQEG-4 This engine shall not be operated for testing purposes during CTG startup/shutdown periods or tested during the same hour as the fire pump.

[Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall submit all dates of operation, elapsed time in hours, and the reason for each operation.

AQEG-5 This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 15 ppm on a weight basis per CARB Diesel Fuel or equivalent requirements. [Rule 404; Rule 431.2; 17 CCR 93115; NSPS IIII]

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA and CPM.

AQEG-6 A non-resettable four digit hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.

[Rule 1302; 17 CCR 93115; NSPS IIII]

Verification: The project owner shall make the site available to the District, U.S. EPA and CPM for inspection.

AQEG-7 The project owner shall maintain a log for this unit, which, at a minimum, contains the information specified below. This log shall be maintained current and on-site for a minimum of five (5) years and shall be provided to District personnel on request:

a. Date of each use or test;

b. Duration of each use or test in hours;

c. Reason for each use;

d. Cumulative calendar year use, in hours; and,

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

[Rule 1302; 17 CCR 93115; NSPS IIII]

Verification: As part of the quarterly and annual compliance reports, the project owner shall submit all dates of operation, elapsed time in hours, the reason for each operation, and the cumulative calendar use. During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA and CPM.

AQEG-8 This engine shall not be used to provide power to the interconnecting utility and shall be isolated from the interconnecting utility when operating.

[Rule 1303]

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA and CPM.

AQEG-9 The 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. [17 CCR 93115]

Verification: As part of the quarterly and annual compliance reports, the project owner shall submit all dates of operation, elapsed time in hours, and the reason for each operation.

AQEG-10 This engine shall exhaust through a stack at a minimum height of 20 feet.

[Rule 1303]

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA and CPM.

AQEG-11 This equipment shall comply with the applicable requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115) and the standards of Performance for Stationary Compression Ignition Internal Combustion Engines -40 CFR Part 60 Subpart IIII.

Verification: The project owner shall make the site and applicable records available to the District, U.S. EPA and CPM for inspection.

Emergency Fire Suppression Water Pump Conditions

[One 140 hp emergency IC engine driving a fire suppression water pump, Application Number: AV2000000501]

AQFS-1 Operation of this equipment shall be conducted in compliance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.

[Rule 204]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQFS-2 This stationary certified EPA Tier 3 diesel IC engine shall be installed, operated and maintained in accordance with the recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of contaminants.

[Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall include information on the date, time, and duration of any violation of this permit condition.

AQFS-3 This direct drive fire pump engine shall be limited to use for emergency fire suppression, defined as in 17 CCR 93115. In addition, this unit may be operated as part of a testing program that does not exceed 1 hour in any day and not more than 50 hours of testing or maintenance per year (rolling 12 month sum). Furthermore, pursuant to District Rule 1110.2, this unit shall be operated less than 200 hours per calendar year. This requirement includes usage during emergencies.

[Rule 1302; 17 CCR 93115; NSPS IIII]

Verification: As part of the quarterly and annual compliance reports, the project owner shall submit all dates of operation, elapsed time in hours, the reason for each operation, and the annual maintenance per year (rolling 12-month sum).

AQFS-4 This engine shall not be operated for testing purposes during CTG startup/shutdown periods or tested during the same hour as the emergency generator.

[Rule 1303]

Verification: As part of the quarterly and annual compliance reports, the project owner shall submit all dates of operation, elapsed time in hours, and the reason for each operation.

AQFS-5 This unit shall only be fired on ultra-low sulfur diesel fuel, whose sulfur concentration is less than or equal to 15 ppm on a weight basis per CARB Diesel or equivalent requirements.

[Rule 404; Rule 431.2; 17 CCR 93115; NSPS IIII]

Verification: During site inspection, the project owner shall make all records and reports available to the District, ARB, U.S. EPA and CPM.

AQFS-6 A non-resettable four digit hour timer shall be installed and maintained on this unit to indicate elapsed engine operating time.

[Rule 1302; 17 CCR 93115; NSPS IIII]

Verification: The project owner shall make the site available to the District, U.S. EPA and CPM for inspection.

AQFS-7 The owner/operator shall maintain a log for this unit, which, at a minimum, contains the information specified below. This log shall be maintained current and on-site for a minimum of five (5) years and shall be provided to District personnel on request:

a. Date of each use or test;

b. Duration of each use or test in hours;

c. Reason for each use;

d. Cumulative calendar year use, in hours; and,

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

[Rule 1302; 17 CCR 93115; NSPS IIII]

Verification: As part of the quarterly and annual compliance reports, the project owner shall submit all dates of operation, elapsed time in hours, the reason for each operation, and the cumulative calendar use.

AQFS-8 This engine shall exhaust through a stack at a minimum height of 19.5 feet.

[Rule 1303]

Verification: The project owner shall make the site available to the District, U.S. EPA and CPM for inspection.

AQFS-9 This equipment shall comply with the applicable requirements of the Airborne Toxic Control Measure (ATCM) for Stationary Compression Ignition Engines (Title 17 CCR 93115) and the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines-40 CFR Part 60 Subpart IIII.

Verification: The project owner shall make the site and applicable records available to the District, U.S. EPA and CPM for inspection.

BIOLOGICAL RESOURCES CONDITIONS OF CERTIFICATION

DESIGNATED BIOLOGIST SELECTION[5]

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) for approval in consultation with the California Department of Fish and Wildlife CDFW) and U.S. Fish and Wildlife Service (USFWS).

The Designated Biologist must meet the following minimum qualifications:

1. Bachelor's degree in biological sciences, zoology, botany, ecology, or a closely related field;

2. Three years of experience in field biology or current certification of a nationally recognized biological society, such as The Ecological Society of America or The Wildlife Society;

3. At least one year of field experience with biological resources found in or near the project area;

4. Meet the current USFWS Authorized Biologist qualifications criteria (USFWS 2008b) and demonstrate familiarity with protocols and guidelines for the desert tortoise, and be approved by the USFWS; and

5. Possess a recovery permit for desert tortoise and a California ESA Memorandum of Understanding pursuant to Section 2081(a) for desert tortoise and Mohave ground squirrel or have adequate experience and qualifications to obtain these authorizations.

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

Verification: The project owner shall submit the specified information at least 60 days prior to the start of any project-related site disturbance activities. No site or related facility activities shall commence until an approved Designated Biologist is available to be on site.

If a Designated Biologist needs to be replaced, the specified information of the proposed replacement must be submitted to the CPM at least 10 working days prior to the termination or release of the preceding Designated Biologist. In an emergency, the

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

project owner shall immediately notify the CPM to discuss the qualifications and approval of a short-term replacement while a permanent Designated Biologist is proposed to the CPM for consideration.

Designated Biologists shall complete a USFWS Qualifications Form (USFWS 2008b) (www.fws.gov/ventura/speciesinfo/protocols_guidelines) and submit it to the USFWS and CPM within 60 days prior to ground breaking for review and final approval.

DESIGNATED BIOLOGIST DUTIES

BIO-2 The project owner shall ensure that the Designated Biologist performs the following during any site (or related facilities) mobilization, ground disturbance, grading, construction, operation, and closure activities. The Designated Biologist may be assisted by the approved Biological Monitor(s) but remains the contact for the project owner and CPM. 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 (BRMIMP) to be submitted by the project owner;

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

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

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

6. Notify the project owner and the CPM of any non-compliance with any biological resources condition of certification;

7. Respond directly to inquiries of 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;

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 <www.fws.gov/ventura/speciesinfo/protocols_guidelines>; and

10. Maintain the ability to be in regular, direct communication with representatives of CDFW and USFWS, 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 submit in the Monthly Compliance Report to the CPM copies of all written reports and summaries that document biological resources compliance activities. 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/her duties cease, as approved by the CPM.

BIOLOGICAL MONITOR QUALIFICATIONS

BIO-3 The project owner's CPM-approved Designated Biologist shall submit the resume, at least three references, and contact information of the proposed Biological Monitors to the CPM for approval in consultation with CDFW and USFWS. The resume shall demonstrate, to the satisfaction of the CPM, the appropriate education and experience to accomplish the assigned biological resource tasks. Biological Monitors involved in any aspect of desert tortoise surveys or handling must meet the criteria to be considered a USFWS Authorized Biologist (USFWS 2008b) and demonstrate familiarity with the most recent protocols and guidelines for the desert tortoise.

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

Verification: The project owner shall submit the specified information to the CPM for approval at least 60 days prior to the start of any project-related site disturbance activities. The Designated Biologist shall submit a written statement to the CPM confirming that individual Biological Monitor(s) has been trained including the date when training was completed. If additional Biological Monitors are needed during construction, the specified information shall be submitted to the CPM 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 mobilization, ground disturbance, grading, construction, operation, and closure activities. The Designated Biologist shall remain the contact for the project owner and CPM.

Verification: The Designated Biologist shall submit in the Monthly Compliance Report to the CPM copies of all written reports and summaries that document biological resources compliance activities, including those conducted or monitored 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 his/her duties cease, as approved by 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, construction, 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;

3. Notify the CPM if there is a halt of any activities and advise the CPM of any corrective actions that have been taken or will be instituted as a result of the work stoppage, and

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 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 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 will be made by the CPM within five working days after receipt of notice that corrective action is completed, or the project owner will be notified by the CPM that coordination with other agencies will 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 USFWS, CDFW, and the CPM. The WEAP shall be administered to all on-site personnel including surveyors, construction engineers, employees, contractors, contractor’s employees, supervisors, inspectors,

subcontractors, and delivery personnel. The WEAP shall be implemented during site mobilization, ground disturbance, grading, 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 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;

3. Place special emphasis on Swainson's hawk, arroyo toad, desert tortoise and Mohave ground squirrel, including information on physical characteristics, distribution, behavior, ecology, sensitivity to human activities, legal protection, penalties for violations, reporting requirements, and protection measures;

4. Present the meaning of various temporary and permanent habitat protection measures;

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

6. Include a training acknowledgment form to be signed by each worker indicating that he/she 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: At least 60 days prior to the start of any project-related site disturbance activities, the project owner shall provide to the CPM a copy of the draft WEAP and all supporting written materials and electronic media prepared or reviewed by the Designated Biologist and a resume of the person(s) administering the program.

The project owner shall provide in the Monthly Compliance Report the number of persons who have completed the training in the prior month and a running total of all persons who have completed the training to date. At least 10 days prior to site and related facilities mobilization, the project owner shall submit two copies of the CPM-approved final WEAP.

Training acknowledgement forms signed during construction shall be kept on file by the project owner for at least six months after the start of commercial operation.

Throughout the life of the project, the worker education program shall be repeated annually for permanent employees, and shall be routinely administered within one week of arrival to any new construction personnel, foremen, contractors, subcontractors, and other personnel potentially working within the project area. Upon completion of the orientation, employees shall sign a form stating that they attended the program and understand all protection measures. These forms shall be maintained by the project owner and shall be made available to the CPM upon request. Workers shall receive and

be required to visibly display a hardhat sticker or certificate that they have completed the training.

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

BIOLOGICAL RESOURCES MITIGATION IMPLEMENTATION AND MONITORING PLAN

BIO-7 The project owner shall develop a Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and submit two copies of the proposed BRMIMP to the CPM (for review and approval) and shall implement the measures identified in the approved BRMIMP. The BRMIMP shall incorporate impact avoidance and minimization measures described in final versions of the Mohave Ground Squirrel Translocation Plan; the Restoration Plan; the Hazardous Materials Plan; the Sensitive Plant Protection Plan; the Raven Monitoring, Management, and Control Plan; the Swainson's Hawk Monitoring and Mitigation Plan; the Burrowing Owl Monitoring and Mitigation Plan; the Streambed Avoidance and Mitigation Plan; and the Closure Plan.

The BRMIMP shall be prepared in consultation with the Designated Biologist and shall include the following:

1. All biological resources mitigation, monitoring, and compliance measures proposed and agreed to by the project owner (including the Air Quality Road Paving PM10 Mitigation Plan);

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;

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. A detailed description of measures that shall be taken to avoid or mitigate temporary disturbances from construction activities;

7. All locations on a map, at an approved scale, of sensitive biological resource areas subject to disturbance and areas requiring temporary protection and avoidance during construction;

8. Aerial photographs, at an approved scale, of all areas to be disturbed during project construction activities; include one set prior to any site or related facilities mobilization disturbance and one set subsequent to completion of project construction. Provide planned timing of aerial photography and a description of why times were chosen. Provide a final accounting of the before/after acreages and a determination of whether

additional habitat compensation is necessary in the Construction Termination Report;

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

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

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

12. A discussion of biological resources-related facility closure measures including a description of funding mechanism(s); and

13. A process for proposing plan modifications to the CPM and appropriate agencies for review and approval.

Verification: The project owner shall submit the BRMIMP to the CPM at least 60 days prior to start of any project-related site disturbance activities. The CPM, in consultation with other appropriate agencies, will determine the BRMIMP's acceptability within 45 days of receipt. The BRMIMP shall contain all of the required measures included in all biological conditions of certification. No ground disturbance may occur prior to the CPM's approval of the final BRMIMP.

The project owner shall notify the CPM no less than five working days before implementing any modifications to the approved BRMIMP to obtain CPM approval. Any changes to the approved BRMIMP must also be approved by the CPM in consultation with appropriate agencies to ensure no conflicts exist.

Implementation of BRMIMP measures (construction activities that were monitored, species observed) will be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying which items of the BRMIMP have been completed; a summary of all modifications to mitigation measures made during the project's site mobilization, ground disturbance, grading, and construction phases; and which mitigation and monitoring items are still outstanding.

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:

1. Limit Disturbance Area. 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 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 also be located in areas without native vegetation or special-status species habitat. All disturbances, vehicles, and equipment shall be confined to the flagged areas.

2. Minimize Road Impacts. New and existing roads that are planned for construction, widening, or other improvements shall not extend beyond the flagged impact area as described above. All vehicles passing or turning around will do so within the planned impact area or in previously disturbed areas. Where new access is required outside of existing roads (e.g. new spur roads) or the construction zone, the route will be clearly marked (i.e., flagged and/or staked) prior to the onset of construction.

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

4. Monitor During Construction. The Designated Biologist or Biological Monitor shall be present at the construction site during all project activities that have potential to disturb soil, vegetation, and wildlife. In areas that could support desert tortoise, Mohave ground squirrel, or any other sensitive wildlife species, the USFWS-approved Designated Biologist or Biological Monitor shall walk immediately ahead of equipment during brushing and grading activities.

5. Salvage Wildlife during Clearing and Grubbing. The Designated Biologist or Biological Monitor shall salvage and relocate sensitive wildlife during clearing and grading operations. The species shall be salvaged when conditions will not jeopardize the health and safety of the monitor and relocated off-site habitat.

6. Minimize Impacts of Transmission/Pipeline Alignments, Roads, and Staging Areas. For construction activities outside of the plant site (transmission line, pipeline alignments) access roads, pulling sites, and storage and parking areas shall be designed, installed, and maintained with the goal of minimizing impacts to native plant communities and sensitive biological resources. Transmission lines and all electrical components shall be designed, installed, and maintained in accordance with the Avian Power Line Interaction Committee's (APLIC's) *Suggested Practices for Avian Protection on Power Lines* (APLIC 2006) and *Mitigating Bird Collisions with Power Lines* (APLIC 2004) to reduce the likelihood of bird electrocutions and collisions.

7. Avoid Use of Toxic Substances. Road surfacing and sealants as well as soil bonding and weighting agents used on unpaved surfaces shall be non-toxic to wildlife and plants. Anticoagulants shall not be used for rodent control.

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

9. Avoid Vehicle Impacts to Desert Tortoise. No vehicles or construction equipment 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 will be left to move on its own. If the tortoise does not move, the animal will be relocated to a safe location within 500 feet of the project area. No tortoise shall be moved without authorization from the CDFW, USFWS, and CPM.

10. Avoid Wildlife Pitfalls. At the end of each work day, the Designated Biologist shall ensure that all potential wildlife pitfalls (trenches, bores, and other excavations) outside the permanently fenced area have been backfilled. If backfilling is not feasible, all trenches, bores, and other excavations shall be sloped at a 3:1 ratio at the ends to provide wildlife escape ramps, or covered completely to prevent wildlife access, or fully enclosed with tortoise-exclusion fencing. All trenches, bores, and other excavations shall be inspected periodically throughout and at the end of each workday by the Designated Biologist or a Biological Monitor. Should wildlife become trapped, the Designated Biologist or Biological Monitor shall remove and relocate the individual to a safe location. Any wildlife encountered during the course of construction shall be allowed to leave the construction area unharmed.

11. Avoid Entrapment of Desert Tortoise and Mohave Ground Squirrel. Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches, stored less than 8 inches above ground and within desert tortoise or Mohave ground squirrel habitat for one or more days/nights, shall be inspected for tortoises or Mohave ground squirrel 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. These materials would not need to be inspected or capped if they are stored within the permanently fenced area after the clearance surveys have been completed.

12. Minimize Standing Water. Water applied to dirt roads and construction areas (trenches or spoil piles) for dust abatement shall use the minimal amount needed to meet safety and air quality standards in an effort to prevent the formation of puddles, which could attract desert tortoises and common ravens to construction sites. A Biological Monitor shall patrol these areas to ensure water does not puddle and attract desert tortoise, common ravens, and other wildlife to the site and shall take appropriate action to reduce water application where necessary.

13. 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.

14. Worker Guidelines. During construction all trash and food-related waste shall be placed in self-closing containers and removed daily from the site. Workers shall not feed wildlife or bring pets to the project site. Except for law enforcement personnel, no workers or visitors to the site shall bring firearms or weapons.

15. Avoid Spread of Noxious Weeds. The project owner shall implement the following Best Management Practices during construction and operation to prevent the spread and propagation of noxious weeds:

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

    b. Prevent spread of non-native plants via vehicular sources by implementing Trackclean™ or other methods of vehicle cleaning for vehicles coming and going from construction sites. Earth-moving equipment shall be cleaned prior to transport to the construction site;

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

    d. Avoid using invasive non-native species in landscaping plans and erosion control.

16. Stockpile Topsoil. To increase chances for revegetation success, topsoil shall be stockpiled from the project plant site and along project linear features for use in revegetation of temporarily disturbed areas. The top tow (2) to six (6) inches of native topsoil depending on soil conditions that occur at each area subject to temporary disturbance that are relatively free of noxious weeds such as Russian thistle, yellow star thistle, or similar exotics shall be scraped and separately stockpiled for use in revegetation. The amount of topsoil needed for the project plant site and laydown area will be estimated when final design plans are available, and only the amount expected to be needed for revegetation of temporarily disturbed areas will be collected and stockpiled. The collection and stockpiling of topsoil shall be conducted as described in *Rehabilitation of Disturbed Lands in California.* (Newton and Claassen 2003, pp. 39-40.)

17. Implement Erosion Control Measures. Standard erosion control measures shall be implemented for all phases of construction and operation where sediment run-off from exposed slopes threatens to enter “Waters of the State”. Sediment and other flow-restricting materials shall be moved to a location where they shall not be washed back into the stream. All

disturbed soils and roads within the project site shall be stabilized to reduce erosion potential, both during and following construction. Areas of disturbed soils (access and staging areas) with slopes toward a drainage shall be stabilized to reduce erosion potential.

18. Monitor Ground-Disturbing Activities Prior to Site Mobilization. If ground-disturbing activities are required prior to site mobilization, such as for geotechnical borings or hazardous waste evaluations, a Designated Biologist or Biological Monitor shall be present to monitor any actions that could disturb soil, vegetation, or wildlife.

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

    a. The 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 percent or greater silt content.

    d. Establish a vegetative ground cover (in compliance with biological resources impact mitigation measures above) or otherwise create stabilized surfaces on all unpaved areas at each of the construction sites within 21 days after active construction operations have ceased.

    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 will be reported in the Monthly Compliance Reports by the Designated Biologist. Within 30 days after completion of project construction, the project owner shall provide to the CPM, for review and approval, a written construction termination report identifying how measures have been completed.

COMPLIANCE VERIFICATION

BIO-9 The project owner shall provide Energy Commission staff, CDFW, 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 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, 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, CDFW, and USFWS at least 14 calendar days before initiating ground-disturbing activities. Immediately notify the CPM, CDFW, 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. CDFW 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 more frequently 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.

4. Monthly Compliance Inspections. Conduct compliance inspections at a minimum of once per month after clearing, grubbing, and grading are completed and until construction is completed and submit a monthly compliance report to the CPM, USFWS, and CDFW. 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 facility remains in operation, provide the CPM, USFWS, and CDFW 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, and 4) recommendations on how effectiveness of mitigation measures might be improved.

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, CDFW, and USFWS shall be notified immediately by phone. 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 two calendar days of the incident and include the following information as relevant:

    a. Injured Desert Tortoise. If a desert tortoise is injured as a result of project-related activities during construction, the Designated Biologist shall immediately take it to a CDFW-approved wildlife rehabilitation and/or veterinarian clinic. Any veterinarian bills for such injured animals shall be paid by the project owner. Following phone notification as required above, the CPM, CDFW, and USFWS shall determine the final disposition of the injured animal, if it recovers. Written notification shall include, at a minimum, the date, time, and location, circumstances of the incident, and the name of the facility where the animal was taken.

    b. Desert Tortoise/Mohave Ground Squirrel Fatality. If a desert tortoise or Mohave ground squirrel is killed by project-related activities during construction or operation, or if a desert tortoise or Mohave ground squirrel 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 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, CDFW, 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, CDFW, and USFWS.

No later than January 31st of every year the ~~PHPP~~ facility remains in operation, provide the CPM 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.

RESTORATION PLAN FOR IMPACTS TO NATIVE VEGETATIONCOMMUNITIES

BIO-10 The project owner shall provide restoration for impacts to native vegetation communities and develop and implement a Restoration Plan for all areas subject to temporary project disturbance. Upon completion of construction, all temporarily disturbed areas shall be revegetated, excluding the road and roadbed. The following measures shall be implemented for the revegetation effort areas not subject to the facility Landscape Plan. These measures will include:

1. Plan Details. The plans shall include at minimum: (a) the location of the mitigation site; (b) locations and details for top soil storage; (c) the plant species to be used; (d) seed collection guidelines; (e) a schematic depicting the mitigation area; (f) time of year that the planting will occur and the methodology of the planting; (g) a description of the irrigation methodology if used; (h) measures to control exotic vegetation on site; (i) success criteria; (j) a detailed monitoring program; and k) locations and impacts to all Joshua and Juniper Trees. All habitats dominated by non-native species prior to project disturbance shall be revegetated using appropriate native species.

2. Topsoil Salvage. Topsoil shall be stockpiled from the project plant site and linear features for use in revegetation of temporarily disturbed soils. The

top two (2) to six (6) inches of soil depending on soil conditions that occur at each area subject to temporary disturbance that are relatively free of noxious weeds such as Russian thistle, yellow star thistle, or similar exotics shall be scraped and separately stockpiled for use in revegetation of temporarily disturbed areas. The amount of topsoil needed for the project plant site and laydown area will be estimated when final design plans are available, and only the amount expected to be needed for revegetation of temporarily disturbed areas will be collected and stockpiled. The collection and stockpiling of topsoil shall be conducted as described on pages 39-40 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003).

3. Seed Stock. Only seed of locally occurring species shall be used for revegetation. Seeds shall contain a mix of short-lived early pioneer species such as native annuals and perennials and subshrubs (for example, squirreltail, cheesebush, matchweed, peppergrass, rabbitbrush, creosote bush, burro-weed, wolfberry, Nevada tea, needlegrass, rice grass, goldenhead). Seeding shall be conducted as described in Chapter 5 of *Rehabilitation of Disturbed Lands in California* (Newton and Claassen 2003, as updated). 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 required special-status plant surveys of the ~~PHPP~~ project area can also be used as a guide to site-specific plant selection for revegetation.

4. Monitoring Requirement and Success Criteria. Post-seeding and planting monitoring will be yearly from years one to five or until the success criteria are met. If the survival and cover requirements have not been met, the owner is responsible for replacement planting to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements as previously mentioned. Remediation activities (e.g. additional planting, removal of non-native invasive species, or erosion control) shall be taken during the five-year period if necessary to ensure the success of the restoration effort. If the mitigation fails to meet the established performance criteria after the five-year maintenance and monitoring period, monitoring and remedial activities shall extend beyond the five-year period until the criteria are met or unless otherwise specified by the Energy Commission. If a fire occurs in a revegetation area within the five-year monitoring period, the owner shall be responsible for a one-time replacement. If a second fire occurs, no replanting is required, unless the fire is caused by the owner's activity.

Verification: All mitigation measures and their implementation methods shall be included in the BRMIMP and implemented. Within 90 days after completion of project construction, the project owner shall provide to the CPM verification of the total vegetation and community subject to temporary and permanent disturbance. If habitat disturbance exceeded that described in this analysis, the CPM shall notify the project owner of any additional mitigation required to compensate for any additional habitat

disturbances t. To monitor and evaluate the success of the restoration the owner shall submit annual reports of the restoration including the status of the site, percent cover of native and exotics, and any remedial actions conducted by the owner to the CPM.

SPECIAL-STATUS PLANT SURVEYS/PROTECTION PLAN

BIO-11 To avoid impacts to State and federally listed Threatened and Endangered, Proposed, Petitioned, and Candidate or California Native Plant Society List 1B or 2, plants that might occur on the project site or along the proposed transmission line alignments, pre-construction surveys shall be conducted in these areas in the Spring closest to commencement of construction of the power plant site and reclaimed water pipeline, and in the Spring prior to the commencement of ground disturbance for the transmission line and natural gas pipeline. If special-status plant species are detected within 100 feet of the project footprint, the qualified botanist shall prepare a Sensitive Plant Protection Plan to avoid direct and indirect impacts. The project owner shall implement the following measures:

1. Pre-Construction Floristic Surveys. A qualified botanist shall conduct floristic surveys on the ~~PHPP~~ project site and along linear facilities in all areas subject to ground-disturbing activity, including, but not limited to, tower pad preparation and construction areas, tower removal sites, pulling and tensioning sites, assembly yards, and areas subject to grading for new access roads. Surveys shall be conducted within 100 feet of all surface-disturbing activities at the appropriate time of year and according to the most current guidelines from the California Department of Fish and Game and the California Native Plant Society.

2. Sensitive Plant Protection Plan. If special-status plant species are detected during pre-construction surveys, a qualified botanist shall prepare a Sensitive Plant Protection Plan (Plan). Populations of rare plants shall be flagged and mapped prior to any ground disturbance. Where possible the owner shall modify the placement of structures, access roads, laydown areas, and other ground-disturbing activities in order to avoid the plants. The Plan shall include measures for avoiding direct impacts and accidental impacts during construction by identifying the plant occurrence location and establishing an appropriately sized buffer. The Plan shall also include measures to avoid indirect impacts including: sedimentation from adjacent disturbed soils; alterations of the site hydrology from changes in the drainage patterns; dust deposition; and displacement or degradation of the habitat from the introduction and spread of noxious weeds. The Plan shall also include a discussion of monitoring and reporting requirements during and after construction.

    a. Prior to any ground disturbance, any populations of listed plant species identified during the surveys shall be protected by a buffer zone if they can be avoided. The buffer zone shall be established around these areas and shall be of sufficient size to eliminate potential disturbance to the plants from human activity and any other potential sources of disturbance including human trampling, erosion, and dust. The size of

the buffer will depend upon the proposed use of the immediately adjacent lands, and includes consideration of the plant's ecological requirements (e.g., sunlight, moisture, shade tolerance, edaphic physical and chemical characteristics) that are identified by the Designated Biologist. The buffer for herbaceous species shall be, at minimum, 50 feet from the perimeter of the population or the individual. A smaller buffer may be established, provided there are adequate measures in place to avoid the take of the species, with the approval of the USFWS, CDFW, and CPM.

b. Impacts to non-listed plant species (i.e., CNPS List 1 and 2, species) shall first be avoided where feasible, and, where not feasible, impacts shall be compensated through reseeding (with locally collected seed stock), or other CPM-approved methods. If Project activities will result in loss of more than 10 percent of the known individuals within an existing population of non-listed special-status plant species, the project owner shall preserve existing off-site occupied habitat that is not already part of the public lands in perpetuity at a 2:1 mitigation ratio. The CPM may reduce this ratio depending on the sensitivity of the plant. The preserved habitat shall be occupied by the plant species impacted, and be of superior or similar habitat quality to the impacted areas in terms of soil features, extent of disturbance, habitat structure, and dominant species composition, as determined by a qualified plant ecologist.

3. State or Federally Listed Plant Species: If impacts to listed plants are determined to be unavoidable, the USFWS shall be consulted for authorization and/or the CDFW shall be consulted for authorization through an Incidental Take Permit. Additional mitigation measures to protect or restore listed plant species or their habitat may be required by the CDFW before impacts are authorized.

4. Agency Notification and Avoidance: If State or federally listed plant species are detected during the pre-construction floristic surveys, the CPM, USFWS, and CDFW shall be notified in writing no more than 15 days from detection of the plants.

5. Review and Submittal of Plan: The project owner shall submit to the CPM, USFWS, and CDFW a draft Sensitive Plant Protection Plan. Prior to any ground-disturbing activities within 100 feet of the sensitive plant occurrences detected during the pre-construction floristic surveys, the project owner shall submit to the CPM a final Plan that reflects review and approval by Energy Commission staff in consultation with CDFW and USFWS.

Verification: No later than 60 days prior to ground disturbance the project owner shall submit a report describing the results of floristic surveys conducted on the ~~PHPP~~ power plant site and along the proposed transmission line alignment. The report shall be submitted to the CPM, USFWS, and CDFW and shall describe qualifications of the surveyor, survey methods including dates and times, a discussion of visits to reference

sites, figures depicting the area(s) surveyed, figures depicting the locations of any special-status plants observed, and a list of all plant species detected.

If special-status plant species are detected during the surveys, the project owner shall submit to the CPM and CDFW a Sensitive Plant Protection Plan (Plan) at least 60 days prior to the start of any ground-disturbing activities within 100 feet of the sensitive plant occurrences detected during the pre-construction floristic surveys. The CPM will determine the Plan's acceptability in consultation with CDFW and USFWS within 15 days of receipt of the Plan. Any modifications to the approved Plan shall be made only after approval by Energy Commission staff in consultation with CDFW. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM-approved modifications to the Plan.

Within 30 days after completion of construction the project owner shall provide to the CPM, USFWS, and CDFW a construction termination report discussing how mitigation measures described in the Plan were implemented.

AVOIDANCE MEASURES FOR ARROYO TOAD

BIO-12 The project owner shall conduct pre-construction surveys for arroyo toads at the Little Rock Creek transmission line crossing on Segment 2 and implement impact avoidance and minimization measure during all construction activities. These measures include, but are not limited to, the following:

1. Surveys. Prior to ground disturbance the project owner shall retain a biologist who is familiar with arroyo toads that occur in desert habitats to conduct clearance surveys prior to construction and monitor all construction activities at Little Rock Creek. Clearance surveys shall be completed within 24 hours of construction. If arroyo toads are detected a 500 foot disturbance free buffer shall be implemented and the area shall be avoided until the owner completes consultation with the USFWS.

2. Monitoring. The project owner shall conduct full time monitoring during ground disturbance and construction of the all areas within 500 feet of Little Rock Creek. Although this species is primarily nocturnal and aestivates during the winter monitoring shall occur year round whenever day time temperatures exceed 50 degrees Fahrenheit and during periods of rainfall. If arroyo toads are detected the Designated Biologist shall contact the CPM and USFWS within 24 hours. Work shall not occur within 500 feet of Little Rock Creek until approved by the CPM and USFWS.

Verification: Within 30 days of completion of arroyo toad clearance surveys the Designated Biologist shall submit a report to the CPM describing how mitigation measures described above have been satisfied. The report shall include the survey results and any other information needed to demonstrate compliance with the measures described above.

DESERT TORTOISE CLEARANCE SURVEYS AND EXCLUSION FENCING

BIO-13 The project owner shall undertake appropriate measures to manage construction at the plant site and linear facilities in a manner to avoid impacts to desert tortoise. Methods for clearance surveys, fence installation, and other procedures shall be consistent with those described in the *Guidelines for Handling Desert Tortoise During Construction Projects* (Desert Tortoise Council 1999) or more current guidance provided by CDFW and USFWS. These measures include, but are not limited to, the following:

1. Fence Installation. Prior to ground disturbance, the entire plant site shall be fenced with permanent desert tortoise-exclusion fence. To avoid impacts to desert tortoise during fence construction, the proposed fence alignment shall be flagged and the alignment surveyed within 24 hours prior to fence construction. Surveys shall be conducted by the Designated Biologist using techniques approved by the USFWS and CDFW. Biological Monitors may assist the Designated Biologist under his or her supervision. These surveys shall provide 100 percent coverage of all areas to be disturbed during fence construction and an additional transect along both sides of the proposed fence line. This fence line transect shall cover an area approximately 90 feet wide centered on the fence alignment. Transects shall be no greater than 30 feet apart. All desert tortoise burrows, and burrows constructed by other species that might be used by desert tortoises, shall be examined to assess occupancy of each burrow by desert tortoises and handled in accordance with USFWS-approved protocol.

    a. Timing, Supervision of Fence Installation. The exclusion fencing shall be installed prior to the onset of site clearing and grubbing. The fence installation shall be supervised by the Designated Biologist and monitored by the Biological Monitors to ensure the safety of any tortoise present.

    b. Fence Material and Installation. The permanent tortoise exclusionary fencing shall be constructed in compliance with current USFWS guidelines.

    c. Security Gates. Security gates shall be designed with minimal ground clearance to deter ingress by tortoises, including gates that would exclude public access to the project site.

    d. Tower Fencing. If tortoises are discovered during clearance surveys of the linear routes, the tower locations shall be temporarily fenced with tortoise exclusion fencing to prevent desert tortoise entry during construction. Temporary fencing must follow current USFWS guidelines for permanent fencing and supporting stakes shall be sufficiently spaced to maintain fence integrity.

    e. 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. Permanent fencing shall be inspected monthly and during/following all major rainfall events. Any damage to the fencing shall be temporarily repaired immediately to keep tortoises out of the site, and permanently repaired within two days of observing damage. Inspections of permanent site fencing shall occur for the life of the project. Temporary fencing must be inspected weekly and, where drainages intersect the fencing, during and immediately following major rainfall events. All temporary fencing shall be repaired immediately upon discovery and, if the fence may have permitted tortoise entry while damaged, the Designated Biologist shall inspect the utility corridor or tower site for tortoise.

2. Desert Tortoise Clearance Surveys. Following construction of the tortoise exclusionary fencing around the Plant Site, all fenced areas shall be cleared of tortoises by the Designated Biologist, who may be assisted by Biological Monitors. A minimum of two clearance surveys, with negative results, must be completed, and these must coincide with heightened desert tortoise activity from late March through May and during October. To facilitate seeing the ground from different angles, the second clearance survey shall be walked at 90 degrees to the orientation of the first clearance survey.

3. Relocation for Desert Tortoise. If desert tortoises are detected on the power plant site during clearance or other activities, the owner shall halt ground disturbing activities within 500 feet of the tortoise, prepare a Desert Tortoise Translocation Plan, and coordinate with the USFWS, CDFW, and CPM regarding the disposition of the animals. If located during clearance surveys within the transmission line project route, the tortoise would be allowed to continue unimpeded out of harm's way. Only in the event that a tortoise required relocation to prevent injury, project impact area the Designated Biologist shall move the tortoise the shortest possible distance, keeping it out of harm's way but still within its home range. Desert tortoise encountered during construction of any of the utility corridors shall be similarly treated in accordance with the techniques described in the *Guidelines for Handling Desert Tortoise during Construction Projects* (Desert Tortoise Council 1999) or more current guidance on the USFWS website. Any person handling tortoise must be approved by the USFWS and CDFW and be on site during ground disturbance or construction. If a desert tortoise is discovered on the power plant site the project owner shall prepare a Desert Tortoise Translocation Plan. The Translocation Plan shall follow the most current USFWS guidelines for the translocation of desert tortoise and shall be submitted to the USFWS, CDFW, and CPM for approval. Desert tortoise shall not be moved pending the approval of the Plan. Prior to initiating further ground disturbance at the project site the project owner shall conduct additional clearance surveys of the power plant site.

4. Burrow Inspection. All potential desert tortoise burrows within the fenced area shall be searched for presence. In some cases, a fiber optic scope may be needed to determine presence or absence within a deep burrow. To prevent reentry by a tortoise or other wildlife, all burrows shall be collapsed once absence has been determined.

5. Burrow Excavation. Burrows inhabited by tortoises shall be excavated by the Designated Biologist or other USFWS/CDFW/CPM approved handler, using hand tools, and then collapsed or blocked to prevent re-occupation. If excavated during May through July, the Designated Biologist shall search for desert tortoise nests/eggs. All desert tortoise handling and removal, and burrow excavations, including nests, shall be conducted by the Designated Biologist or other USFWS/CDFW/CPM approved handler (See Paragraph 3 above) in accordance with the USFWS-approved protocol (Desert Tortoise Council 1999) or more current guidance on the USFWS website.

6. Monitoring During Clearing. Following construction of the desert tortoise exclusion fencing and clearance surveys heavy equipment shall be allowed to enter the project site to perform earth work such as clearing, grubbing, leveling, and trenching. A Biological Monitor shall be onsite during initial clearing and grading activities. Should a tortoise be discovered, the measures outlined in Paragraph 3 shall be followed.

7. Reporting. The Designated Biologist shall record the following information for any desert tortoises observed or handled: a) the locations (narrative and maps) and dates of observation; b) general condition and health, including injuries, state of healing and whether desert tortoise voided their bladders; c) location moved from and location moved to (using GPS technology); d) gender, carapace length, and diagnostic markings (i.e., identification numbers or marked lateral scutes); e) ambient temperature when handled and released; and f) digital photograph of each handled desert tortoise as described in the paragraph below. Desert tortoise moved from within project areas shall be marked for future identification as described in *Guidelines for Handling Desert Tortoise during Construction Projects* (Desert Tortoise Council 1999) or more current guidance on the USFWS website. Digital photographs of the carapace, plastron, and fourth costal scute shall be taken. Scutes shall not be notched for identification. Any desert tortoises observed within the project area or adjacent habitat shall be reported to the USFWS, CDFW, and CPM by written and electronic correspondence within 24 hours.

Verification: Within 30 days of completion of desert tortoise clearance surveys the Designated Biologist shall submit a report to the CPM, USFWS, and CDFW describing how each of the mitigation measures described above has been satisfied. 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.

If a desert tortoise is located on the power plant site the project owner shall submit to Energy Commission staff, USFWS and CDFW a draft Desert Tortoise Translocation Plan. The CPM will review the Plan and provide comments within 30 days receipt of the draft plan. All modifications to the Desert Tortoise Translocation Plan must be made only after approval by the Energy Commission staff in consultation with USFWS and CDFW. The project owner shall notify the CPM no fewer than five working days before implementing any CPM-approved modifications to the Translocation Plan.

Within 30 days after initiation of translocation activities, the Designated Biologist shall provide to the CPM for review and approval, a written report identifying which items of the Translocation Plan have been completed, and a summary of all modifications to measures made during implementation.

RAVEN FEE, MONITORING, MANAGEMENT, AND CONTROL PLAN

BIO-14 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, CDFW, 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 CDFW. 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 REAT Regional Raven Management Program. The project owner shall submit payment to the project sub-account of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the REAT Regional Raven Management Program. The amount shall be a one-time payment of $105 per acre (135.5 acres) of permanent disturbance fee $14,227.50.

Verification: No later than 30 days prior to any construction-related ground disturbance activities, the Project owner shall provide the CPM, USFWS, and CDFW 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 CDFW. No later than 60 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. 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-15 Pre-construction nest surveys shall be conducted if construction activities will occur from February 1 through August 15. The Designated Biologist or Biological Monitor conducting the surveys shall be experienced bird surveyors and 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:

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 surveys shall be conducted, separated by a minimum 10-day interval. One of the surveys shall to be conducted within the 10 days preceding initiation of construction activity. Additional follow-up surveys may be required if periods of construction inactivity exceed three weeks in any given area, an interval during which birds may establish a nesting territory and initiate egg laying and incubation;

3. If active nests are detected during the survey, a no-disturbance buffer zone (protected area surrounding the nest, the size of which is to be determined by the Designated Biologist in consultation with CDFW, USFWS, and CPM) and a monitoring plan shall be developed. Nest locations shall be mapped using GPS technology and submitted, along with a weekly report stating the survey results, to the CPM; and

4. The Designated Biologist shall monitor the nest until he or she determines that nestlings have fledged and dispersed. Activities that might, in the opinion of the Designated Biologist and in consultation with the CPM,

disturb nesting activities shall be prohibited within the buffer zone until such a determination is made.

5. If an occupied golden eagle nest is detected within one mile of the active construction, a one mile no activity buffer will be implemented. The prescribed buffers may be adjusted to reflect existing conditions including ambient noise, topography, and disturbance with the approval of the CPM. The biological monitor(s) shall conduct regular monitoring of the nest to determine success/failure and to ensure that project activities are not conducted within the buffer(s) until the nesting cycle is complete or the nest fails. The biological monitor(s) shall be responsible for documenting the results of the surveys and ongoing monitoring and will provide a copy of the monitoring reports for impact areas to the respective agencies. The Project owner shall also 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 (Page l 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: At least 10 days prior to the start of any project-related ground disturbance activities, the project owner shall provide the CPM a letter-report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity and qualifications of the surveyor(s); and a list of species observed. If active 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.

SWAINSON'S HAWK IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-16 The project owner shall implement the following measures to avoid and offset impacts to Swainson's hawk:

1. Pre-Construction Surveys. To assure that nesting Swainson's hawks are not disturbed by construction activities, a qualified ornithologist approved by the CDFW and CPM shall conduct pre-construction surveys prior to commencement of ground disturbing activities. Survey results shall be provided to the CDFW and CPM in a written report, within 30 days of commencement of construction activities.

2. Swainson's Hawk Monitoring and Mitigation Plan. If a Swainson's hawk nest site is found within 0.5 mile of the project site, the Designated Biologist shall prepare a Swainson's Hawk Monitoring and Mitigation Plan in consultation with CDFW and Energy Commission staff. This plan shall include detailed measures to avoid and minimize impacts to Swainson's hawks in and near the construction areas and shall also include the following:

    a. If a nest site is found, no new disturbances or other project-related activities that may cause nest abandonment or forced fledging will be initiated within .5 mile of an active nest between 1 March and 15 September. These buffer zones may be adjusted in consultation with the CPM and CDFW.

    b. During the nesting season (March 1 through September 15), the Designated Biologist shall be present daily, during any site mobilization, ground disturbance or construction on site, monitoring the behavior of any nesting Swainson's hawks within 0.5 mile of the project. The Designated Biologist shall have authority to order the cessation of all construction activities within 0.5 mile of any Swainson's hawk nest if the birds exhibit abnormal nesting behavior which may cause reproductive failure (nest abandonment and loss of eggs and/or young). Construction shall not resume until the Designated Biologist has consulted with the CDFW and CPM. The Designated Biologist, CPM, and CDFW must confirm that the bird's behavior has normalized prior to the initiation of construction.

    c. If construction or other project-related activities cause nest abandonment by a Swainson's hawk or forced fledging, monitoring of the nest site by a qualified biologist shall be required to determine if the nest is abandoned. If the nest is abandoned and if the nestlings are still alive, the project owner shall fund the recovery and hacking (controlled release of captive reared young) of the nestling(s). Transport to the raptor center shall only be approved by the CPM and CDFW Regional Representative.

    d. If relocation of nestlings is required, the project owner shall provide a written report documenting the relocation efforts. The report shall include what actions were taken to avoid the nest, the location of the nest, the number and condition of the eggs/nestlings taken from the nest, the location of where the eggs/nestlings are incubated, the survival rate, the location of the nests where the chicks are relocated, and whether the birds were accepted by the adopted parent.

    e. Nest trees for Swainson's hawks in the project area shall not be removed unless avoidance measures are determined to be infeasible. If a nest tree for a Swainson's hawk must be removed from the project area, it shall occur between 1 October and 1 February.

3. Discovery of an Injured Swainson's Hawk. If a Swainson's hawk is found injured during project-related activities on the project site, it shall be immediately relocated to a raptor recovery center approved by the CDFW Regional Representative. Any costs associated with the care or treatment of such injured Swainson's hawks shall be borne by the project owner. The Designated Representative shall immediately notify the CDFW and CPM of the incident unless the incident occurs outside of normal business hours. In that event, the CDFW and CPM shall be notified no later than noon on the next business day. Notification to the CDFW and CPM shall be via telephone or email, followed by a written incident report. Notification shall include the date, time, location, and circumstances of the incident.

Verification: Survey results shall be provided to the CDFW and CPM in a written report, within 30 days of commencement of construction activities. If pre-construction surveys detect nesting Swainson's hawks within 0.5 mile of proposed construction activities, the Designated Biologist shall provide to CDFW and the CPM a Swainson's Hawk Monitoring and Mitigation Plan at least 30 days prior to the start of any project-related site disturbance activities. The project owner shall report monthly to CDFW and the CPM for the duration of construction on the implementation of Swainson's hawk avoidance and minimization measures described in the Swainson's Hawk Monitoring and Mitigation Plan. Within 30 days after completion of construction, the project owner shall provide to the CDFW and CPM a written construction termination report identifying how mitigation measures described in the plan have been completed.

No later than two calendar days following the above-required notification of a sighting, kill, injury, or relocation of a Swainson's hawk, the project owner shall deliver to the CPM and CDFW 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 Swainson's hawk, identifying who was notified and explaining when the incident(s) 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 and CDFW.

SWAINSON'S HAWK HABITAT COMPENSATORY MITIGATION

BIO-17 The project owner shall either assume that a Swainson's hawk nest is within five miles of the project site and provide compensatory mitigation as described below or complete CDFW protocol surveys within five miles of project facilities that result in permanent impacts to Swainson's hawk foraging habitat. If surveys are completed they shall include the following components.

The survey periods shall follow a specified schedule:

- Period I occurs from 1 January to 31 March;
- Period II occurs from 1 April to 30 April;
- Period III occurs from 1 May to 30 May; and
- Period IV occurs from 1 June to 15 July.

No fewer than three surveys per period in at least two survey periods shall be completed immediately prior to the start of project construction. All nest sites shall be recorded, mapped using GIS and provided to the CPM and CDFW. Compensatory mitigation at a 2:1 ratio shall be required for permanent impacts. If active Swainson's hawk nests (i.e., any nest active within five years) are not detected within 5 miles of the project site or linear facilities, the project owner will not be required to provide compensatory mitigation.

If the project owner assumes presence, the project owner shall provide compensatory mitigation acreage for **211** acres of Swainson's hawk habitat lands, adjusted to reflect the final project footprint, as specified in this condition. In addition, the project owner shall provide funding for initial improvement and long-term maintenance, enhancement, and management of the acquired lands for protection and enhancement Swainson's hawk populations, and comply with other related requirements of this condition.

a. Loss of foraging habitat for Swainson's hawks shall be mitigated by providing Habitat Management (HM) lands at a ratio of 2:1 for any foraging habitat impacted within a 5-mile radius of active Swainson's hawk nest(s) CDFW considers a nest active if it was used one or more times within the last 5 years). Foraging habitat includes but is not limited to alfalfa; fallow fields; beet, tomato, onions, and other low-growing row or field crops; dry-land and irrigated pasture; and cereal grain crops (including corn after harvest). Joshua tree woodland shall be considered foraging habitat in the Antelope Valley.

b. Lands which are currently in urban use or lands that have no existing or potential value for foraging Swainson's hawks will not require mitigation. The project owner will provide the CPM and CDFW a report of potential foraging lands impacted by the proposed project as determined by consultation with the CDFW and recent site-specific surveys conducted by a CDFW -qualified raptor biologist.

This acreage was calculated as follows: a ratio of 2:1 for the power plant site (100 acres), 2:1 ratio for the laydown site (40 acres), and a 2:1 ratio (71 acres) for the loss of native vegetation and agricultural lands associated with the transmission line. The project owner shall use a good faith effort to purchase compensation acres for Swainson's hawk within 15 miles of previously surveyed locations of Swainson's hawk nesting sites. Costs of these requirements are estimated to be $2,794,265.00(see Biological Resources Table~~s~~ 2 for a complete breakdown of costs and acreage). All costs are best estimates as of fall 2010. Actual costs will be determined at the time of the transactions and may change the funding needed to implement the required mitigation obligation based on changing land costs or management fees. Regardless of the estimates, the project owner is responsible for providing adequate funding to implement the required mitigation.

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 Project Site and 25.25 acres of Mohave creosote bush scrub and Joshua tree woodland and 10.22 acres of agricultural lands that occur on the transmission line.

This compensation acreage may be included ("nested") within the acreage acquired and managed as Mohave ground squirrel habitat compensation (Condition of Certification **BIO-20**) only if:

- A minimum of 211 acres of suitable foraging habitat including a minimum of 76.5 acres of Joshua tree woodland are present. The project owner shall use a good faith effort to purchase compensation acres for Swainson's hawk within 15 miles of previously surveyed locations of Swainson's hawk nesting sites.
- The composition of vegetation communities that occur within the proposed mitigation lands, including the acreage of Joshua tree woodland, may be adjusted based on the habitat value of the proposed mitigation lands with the approval of the CPM and CDFW.
- The Mohave ground squirrel habitat compensation lands are acquired and dedicated as permanent conservation lands within 18 months of the start of project construction.

If these three criteria are not met, then the project owner shall provide the required number of acres of Swainson's hawk 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 this condition.

The project owner shall provide financial assurances as described below in the amount of $2,794,265.00. In lieu of acquiring lands itself, the Project owner may satisfy the requirements of this condition by depositing funds into a Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described below. If the Project owner elects to establish a REAT NFWF Account and have NFWF and the agencies complete the required habitat compensation, then the total estimated cost of complying with this condition is $2,881,152.45. The amount of security or NFWF deposit shall be adjusted up or down to reflect any revised cost estimates recommended by REAT.

The actual costs to comply with this condition will vary depending on the final footprint of the project, the 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 or similar analysis (below). The 211 acre habitat requirement, and associated funding requirements based on that acreage, shall be adjusted up or down if there are

changes in the final footprint of the project or the associated costs of evaluation, acquisition, management, and other factors listed in Biological Resources Tables 2. Regardless of actual cost, the project owner shall be responsible for funding all requirements of this condition.

COMPENSATORY MITIGATION LAND ACQUISITION

1. Method of Acquisition. Compensation lands shall be acquired by either of the two options listed below. Regardless of the method of acquisition, the transaction shall be complete only upon completion of all terms and conditions described in this Condition of Certification.

    a. The project owner shall acquire lands and transfer title and/or conservation easement to a state or federal land management agency or to a third-party non-profit land management organization, as approved by the CPM in consultation with CDFW; or

    b. The Project owner shall deposit funds into a project-specific subaccount within the REAT Account established with the NFWF, in the amount as indicated in Biological Resources Tables 4a (adjusted to reflect final project footprint and any applicable REAT adjustments to costs).

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

    a. Be within the Western Mojave Desert;

    b. Provide moderate to good quality foraging habitat for Swainson's hawk with capacity to improve in quality and value for this species; and

    c. Be near lands for which there is reasonable evidence (for example, recent (<15 years) CNDDB occurrences on or immediately adjacent to the proposed lands) suggesting current occupation by Swainson's hawk ideally with populations that are stable, recovering, or likely to recover.

    d. 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;

    e. not have a history of intensive recreational use or other disturbance that might cause future erosional damage or other habitat damage, and 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 that cannot be removed to the extent that the site could not provide suitable habitat; and

h. have water and mineral rights included as part of the acquisition, unless the CPM, in consultation with CDFW, agrees in writing to the acceptability of land without these rights.

3. 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 Swainson's hawk in relation to the criteria listed above and must be approved by the CPM. The CPM will share the proposal with and consult with CDFW before deciding whether to approve or disapprove the proposed acquisition.

4. Compensation Lands Acquisition Conditions: The project owner shall comply with the following conditions relating to acquisition of the compensation lands after the CPM, in consultation with CDFW 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 CDFW. For conveyances to the State, approval may also be required from the California Department of General Services, the California 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 CDFW. Any transfer of a conservation easement or fee title must be to CDFW, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to other public agency approved by the CPM in consultation with CDFW. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFW or another entity approved by the CPM. If an approved non-profit holds a conservation easement, CDFW shall be named a third party beneficiary. If an entity other than CDFW holds a conservation easement over the compensation lands, the CPM may require that CDFW or another entity approved by the CPM, in consultation with CDFW, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM, in consultation with CDFW, of

the terms of any transfer of fee title or conservation easement to the compensation lands.

c. 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 CDFW, before it can be used to establish funding levels or management activities for the compensation lands.

5. Compensation Lands Acquisition Costs: The Project owner shall pay all other costs related to acquisition of compensation lands and conservation easements. In addition to actual land costs, these acquisition costs shall include but shall not be limited to the items listed below. Management costs including site cleanup measures are described separately, in the following section.

   a. Level 1 Environmental Site Assessment;

   b. Appraisal;

   c. Title and document review costs;

   d. Expenses incurred from other state, federal, or local agency reviews;

   e. Closing and escrow costs;

   f. Overhead costs related to providing compensation lands to ~~CDFG~~**CDFW** or an approved third party;

   g. Biological survey(s) to determine mitigation value of the land; and

   h. Agency costs to accept the land (e.g., writing and recording of conservation easements; title transfer).

COMPENSATORY MITIGATION LAND IMPROVEMENT

1. Land Improvement Requirements: The Project owner shall fund activities that the CPM, in consultation with the CDFW, 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 surveys of boundaries and property lines, installation of signs, trash removal and other site cleanup measures, construction and repair of fences, invasive plant removal, removal of roads, 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, CDFW or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to Gov. Code § 65965), if it meets the approval of the CPM in consultation with CDFW, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFW takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFW or its designee.

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 and enhance habitat for desert tortoise. Management activities may include maintenance of signs, fences, removal of invasive weeds, monitoring, security and enforcement, and control or elimination of unauthorized use.

2. Long-term Management Plan. The project owner shall pay for the preparation of 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 CDFW.

3. Long-Term Maintenance and Management Funding. 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 $305,950.00 calculated at $1,450 an acre for each compensation acre, as shown in Biological Resources Table 2 (above) into an account for long-term maintenance and management of compensation lands. 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 CDFW before deciding whether to approve an entity to hold the project's

long-term maintenance and management funds on any lands. The CPM, in consultation with the project owner and CDFW, may 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 CDFW takes fee title to the compensation lands, CDFW shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity such as NFWF to manage the long-term maintenance and management fee for CDFW and with CDFW 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. 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 CDFW designed to protect or improve the habitat values of the compensation lands.

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

iii. Pooling 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 CDFW and CPM.

iv. Reimbursement Fund. The project owner shall provide reimbursement to CDFW 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.

COMPENSATORY MITIGATION LAND SECURITY

1. Compensation Mitigation Security: The project owner shall provide security sufficient for funding acquisition, improvement, and long-term management of Swainson's hawk compensation land. 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 CDFW of the form of the Security.

   The security amount shall be based on the estimates provided in Biological Resources Tables 2. This amount shall be updated and verified prior to payment and shall be adjusted to reflect actual costs or more current estimates as agreed upon by the REAT agencies.

   The Project owner shall provide verification that financial assurances have been established to the CPM with copies of the document(s) to CDFW, 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 described in Section A of this condition.

   In the event that the project owner defaults on the Security, 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. 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.

   Security for the requirements of this condition shall be provided in the amount of $2,881,152.45 if the project owner elects to use the REAT Account with NFWF pursuant to paragraph 4 of this condition, below). The Security is calculated in part from the items that follow but adjusted as specified below (consult Biological Resources Tables 4a 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 $10,000/acre;

   ii. Site assessments, appraisals, biological surveys, transaction closing and escrow costs, calculated as $18,000 total per parcel (presuming 60 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.

2. The project owner may elect to comply with some or all of the requirements in this condition by providing funds to implement the requirements 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 (as set forth in the Security section of this condition, paragraph 3, above). If the actual cost of the acquisition, initial protection and habitat improvements, long-term funding or other cost 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, the long-term funding requirements as established in an approved PAR or PAR-like analysis, or the other actual costs that are estimated in the table. 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.

4. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFW 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.

5. The project owner may request the CPM to provide it with all available information about any funds held by the Energy Commission, CDFW or NFWF as project security, or funds held in a NFWF sub-account for this project, or other project-specific account held by a third party. The CPM shall also fully cooperate with any independent audit that the project owner may choose to perform on any of these funds.

Verification: The project owner shall provide the CPM with either the results of the nesting surveys or written verification that the project owner shall assume presence no less than 60 days prior to ground disturbance or site mobilization. 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 verification to the CPM and CDFW that an approved Security has been established 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 CDFW of the form of the Security. The project owner, or an approved third party, shall complete and provide written verification to the CPM and CDFW 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 ground-disturbing project activities, the project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase, and shall obtain approval from the CPM, in consultation with CDFW 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 and CDFW of such completion, no later than 18 months after the issuance of the Energy Commission Decision.

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 CDFW 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, shall provide the CPM and CDFW 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 CDFW 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 and CDFW an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during Project construction.

If this analysis shows that more lands were disturbed than was anticipated in this condition, the project owner shall provide the Energy Commission with additional compensation lands and funding commensurate with the added impacts and applicable mitigation ratios set forth in this condition. A final analysis of all project related ground disturbance may not result in a reduction of compensation requirements if the deadlines established under this condition for transfer of compensation lands and funding have passed prior to completion of the analysis.

BURROWING OWL IMPACT AVOIDANCE, MINIMIZATION, AND COMPENSATION MEASURES

BIO-18 The project owner shall implement the following measures to avoid and offset impacts to burrowing owls:

1. Pre-Construction Surveys. Concurrent with desert tortoise clearance surveys the Designated Biologist shall conduct pre-construction surveys for burrowing owls within the project site and along all linear facilities in accordance with CDFW guidelines (CBOC 1993). Pre-construction surveys for burrowing owls shall occur no more than 30 days prior to initiation of ground disturbance or site mobilization activities. The survey area shall include the Project Disturbance Area and surrounding 500 foot survey buffer where access is legally available.

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 ~~PHPP~~ 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 and CDFW, and shall:

a. Identify and describe suitable relocation sites on the project site or 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 CDFW guidelines (CDFW 1995) and shall be approved by the CPM in consultation with CDFW 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 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 CDFW (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 CDFW or to a third party, such as a non-governmental organization dedicated to habitat conservation, subject to approval by the CPM, in consultation with CDFW and USFWS prior to land acquisition or management activities. Additional funds shall be based on the adjusted market value of compensation lands at the time of construction to acquire and manage habitat. 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-20**.

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-20** [Mohave ground squirrel 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 areas occupied by burrowing owls (generally approximately 5 miles). The burrowing owl mitigation lands may be included with the Mohave ground squirrel mitigation lands ONLY if these two burrowing owl criteria are met. If the burrowing owl mitigation land is separate from the acquisition required for Mohave ground squirrel 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 Mohave ground squirrel 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 CDFW 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 CDFW and the USFWS to ensure funding. The estimated costs of enhancement and endowment (see subsection, Mohave ground squirrel, for a discussion of the assumptions used in calculating the Security, which are based on an estimate of $15,169 per acre to fund acquisition, enhancement, and long-term management). 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, **CDFW** 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, CDFW, and USFWS for the duration of construction on the implementation of burrowing owl avoidance and minimization measures.

Within 30 days after completion of construction the Project owner shall provide to the CPM, CDFW 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, CDFW 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, DFW 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, CDFW, and USFWS describing the 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, CDFW 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 CDFW and USFWS, for the compensation lands and associated fund

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, CDFW 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, and CDFW 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.

MOHAVE GROUND SQUIRREL CLEARANCE SURVEYS

BIO-19 The project owner shall undertake appropriate measures to manage construction at the plant site and linear facilities in a manner to avoid or minimize impacts to Mohave ground squirrel. These measures include, but are not limited to, the following:

1. Clearance Survey. After the installation of the desert tortoise exclusion fence and prior to any ground disturbance, the Designated Biologist(s) shall examine the area to be disturbed for Mohave ground squirrels and their burrows. The survey shall provide 100 percent coverage of the project limits. Potentially occupied burrows as determined by a permitted Mohave ground squirrel biologist authorized by the CDFW shall be fully excavated by hand by the Designated Biologist(s).

2. Translocation Plan. The project owner shall develop and implement a Mohave Ground Squirrel Translocation Plan to address the handling and

disposition of any Mohave ground squirrels encountered during the clearance surveys. The Translocation Plan shall be approved by Energy Commission staff in consultation with CDFW. The Translocation Plan shall designate a translocation site as close as possible to the project, and which provides suitable conditions for long-term survival of the relocated Mohave ground squirrel. The plan shall include but not be limited to the following components.

a. identify the appropriate time when translocation may occur

b. the methods of capture, handling, and safe transfer

c. methods of health assessment

d. identify the proposed translocation site

e. identify monitoring and post translocation survivorship

f. identify remedial actions, and

g. reporting procedures to document translocation success.

3. Records of Capture. If Mohave ground squirrels are captured via trapping or burrow excavation, the Designated Biologist shall maintain a record of each Mohave ground squirrel handled, including: a) the locations (Global Positioning System [GPS] coordinates and maps) and time of capture and/or observation as well as release; b) sex; c) approximate age (adult/juvenile); d) weight; e) general condition and health, noting all visible conditions including gait and behavior, diarrhea, emaciation, salivation, hair loss, ectoparasites, and injuries; and f) ambient temperature when handled and released. Any Mohave ground squirrels observed within the project area or adjacent habitat shall be reported to the CDFW and CPM by written and electronic correspondence within 24-hours.

Verification: No less than 60 days prior to any site mobilization the project owner shall provide the CPM and CDFW a draft Mohave Ground Squirrel Translocation Plan. At least 60 days prior to start of any project-related ground disturbance activities, the project owner shall provide the CPM with the final version of a Mohave Ground Squirrel Translocation Plan that has been approved by Energy Commission staff in consultation with CDFW. The CPM will determine the plan's acceptability within 15 days of receipt of the final plan. All modifications to the approved Translocation Plan must be made only after approval of the Energy Commission staff in consultation with CDFW. The project owner shall notify the CPM no fewer than 5 working days before implementing any CPM-approved modifications to the Translocation Plan.

Within 30 days of completion of Mohave ground squirrel clearance surveys the Designated Biologist shall submit a report to the CPM and CDFW describing how mitigation measures described above have been satisfied. The report shall include the Mohave ground squirrel survey results, capture and release locations of any relocated

squirrels, and any other information needed to demonstrate compliance with the measures described above.

Within 30 days after initiation of translocation activities, the Designated Biologist shall provide to the CPM for review and approval, a written report identifying which items of the Translocation Plan have been completed, and a summary of all modifications to measures made during implementation.

MOHAVE GROUND SQUIRREL HABITAT COMPENSATORY MITIGATION

BIO-20 The project owner shall provide compensatory mitigation acreage of 216 acres of Mohave ground squirrel habitat lands, adjusted to reflect the final project footprint, as specified in this condition. In addition, the project owner shall provide funding for initial improvement and long-term maintenance, enhancement, and management of the acquired lands for protection and enhancement Mohave ground squirrel populations, and comply with other related requirements of this condition.

This mitigation ratio is based on a 2:1 ratio for the power plant site and a 3:1 ratio for the transmission line route. Costs of these requirements are estimated to be $2,860,080.00. See Biological Resources Table 3 for a complete breakdown of costs and acreage. All costs are best estimates as of fall 2010. Actual costs will be determined at the time of the transactions and may change the funding needed to implement the required mitigation obligation based on changing land costs or management fees. Regardless of the estimates, the project owner is responsible for providing adequate funding to implement the required mitigation.

In lieu of acquiring lands itself, the project owner may satisfy the requirements of this condition by depositing funds into a Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described below. If the Project owner elects to establish a REAT NFWF Account and have NFWF and the agencies complete the required habitat compensation, then the total estimated cost of complying with this condition is $3,016,483.20.The amount of security or NFWF deposit shall be adjusted up or down to reflect any revised cost estimates recommended by REAT.

The actual costs to comply with this condition will vary depending on the final footprint of the project, the 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 or similar analysis (below). The 216 acre habitat requirement, and associated funding requirements based on that acreage, shall be adjusted up or down if there are changes in the final footprint of the project or the associated costs of evaluation, acquisition, management, and other factors listed in Biological Resources Table 3. Regardless of actual cost, the project owner shall be responsible for funding all requirements of this condition.

COMPENSATORY MITIGATION LAND ACQUISITION

1. Method of Acquisition. Compensation lands shall be acquired by either of the two options listed below. Regardless of the method of acquisition, the transaction shall be complete only upon completion of all terms and conditions described in this Condition of Certification.

    a The project owner shall acquire lands and transfer title and/or conservation easement to a state or federal land management agency or to a third-party non-profit land management organization, as approved by the CPM in consultation with CDFW; or

    b. The project owner shall deposit funds into a project-specific subaccount within the REAT Account established with the NFWF, in the amount as indicated in Biological Resources Table 4b (adjusted to reflect final project footprint and any applicable REAT adjustments to costs).

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

    a. Be in the western Mojave Desert;

    b. Provide moderate to good quality habitat for Mohave ground squirrel with capacity to improve in quality and value for this species;

    c. Be a contiguous block of land (preferably) or located so they result in a contiguous block of protected habitat;

    d. Be adjacent to larger blocks of lands that are already protected, or be in a location approved by the CDFW, such that there is connectivity between the acquired lands and the protected lands;

    e. Be connected to lands for which there is reasonable evidence (for example, recent [<15 years] CNDDB occurrences on or immediately adjacent to the proposed lands) suggesting current occupation by Mohave ground squirrel, ideally with populations that are stable, recovering, or likely to recover;

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

    g. 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

    h. Not be encumbered by easements or uses that would preclude fencing of the site or preclude or unacceptably constrain management of the

site for the primary benefit of the species and their habitat for which mitigation lands were secured.

3. 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 Mohave ground squirrel in relation to the criteria listed above and must be approved by the CPM. The CPM will share the proposal with and consult with CDFW before deciding whether to approve or disapprove the proposed acquisition.

4. Compensation Lands Acquisition Conditions: The project owner shall comply with the following conditions relating to acquisition of the compensation lands after the CPM, in consultation with CDFW 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 CDFW. 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 CDFW. Any transfer of a conservation easement or fee title must be to CDFW, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to other public agency approved by the CPM in consultation with CDFW. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFW or another entity approved by the CPM. If an approved non-profit holds a conservation easement, CDFW shall be named a third party beneficiary. If an entity other than CDFW holds a conservation easement over the compensation lands, the CPM may require that CDFW or another entity approved by the CPM, in consultation with CDFW, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM, in consultation with CDFW, of the terms of any transfer of fee title or conservation easement to the compensation lands.

   c. 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 CDFW, before it can be used to establish funding levels or management activities for the compensation lands.

5. Compensation Lands Acquisition Costs: The Project owner shall pay all other costs related to acquisition of compensation lands and conservation easements. In addition to actual land costs, these acquisition costs shall include but shall not be limited to the items listed below. Management costs including site cleanup measures are described separately, in the following section.

   a. Level 1 Environmental Site Assessment;

   b. Appraisal;

   c. Title and document review costs;

   d. Expenses incurred from other state, federal, or local agency reviews;

   e. Closing and escrow costs;

   f. Overhead costs related to providing compensation lands to CDFW or an approved third party;

   g. Biological survey(s) to determine mitigation value of the land; and

   h. Agency costs to accept the land (e.g., writing and recording of conservation easements; title transfer).

COMPENSATORY MITIGATION LAND IMPROVEMENT

1. Land Improvement Requirements: The Project owner shall fund activities that the CPM, in consultation with the CDFW 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 surveys of boundaries and property lines, installation of signs, trash removal and other site cleanup measures, construction and repair of fences, invasive plant removal, removal of roads, 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, CDFW or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to Gov. Code § 65965), if it meets the approval of the CPM in consultation with CDFW, and if it is authorized to participate in implementing the required activities on the compensation

lands. If CDFW takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFW or its designee.

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 and enhance habitat for desert tortoise. Management activities may include maintenance of signs, fences, removal of invasive weeds, monitoring, security and enforcement, and control or elimination of unauthorized use.

2. Long-term Management Plan: The project owner shall pay for the preparation of 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 **CDFW**.

3. Long-Term Maintenance and Management Funding: 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 $313,200.00 calculated at $1,450 an acre for each compensation acre, as shown in Biological Resources Table ~~3~~ (above) into an account for long-term maintenance and management of compensation lands. 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 CDFW before deciding whether to approve an entity to hold the project's long-term maintenance and management funds on any lands. The CPM, in consultation with the project owner and CDFW, may 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 CDFW takes fee title to the compensation lands, CDFW shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity such as NFWF to manage the long-term maintenance and management fee for CDFW and with CDFW 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. 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 CDFW designed to protect or improve the habitat values of the compensation lands.

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

iii. Pooling 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 CDFW and CPM.

iv. Reimbursement Fund. The project owner shall provide reimbursement to CDFW 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.

COMPENSATORY MITIGATION LAND SECURITY

1. Compensation Mitigation Security: The project owner shall provide security sufficient for funding acquisition, improvement, and long-term management of desert tortoise compensation land. 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 CDFW of the form of the Security.

The security amount shall be based on the estimates provided in Biological Resources Table 3. This amount shall be updated and verified prior to payment and shall be adjusted to reflect actual costs or more current estimates as agreed upon by the REAT agencies.

The Project owner shall provide verification that financial assurances have been established to the CPM with copies of the document(s) to CDFW, 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 described in Section A of this condition.

In the event that the project owner defaults on the Security, 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. 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.

Security for the requirements of this condition shall be provided in the amount of $3,016,483.20 if the project owner elects to use the REAT Account with NFWF pursuant to paragraph 4 of this condition, below). The Security is calculated in part from the items that follow but adjusted as specified below (consult Biological Resources Table 3 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 $10,000/acre;

ii. Site assessments, appraisals, biological surveys, transaction closing and escrow costs, calculated as $18,000 total per parcel (presuming 60 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.

2. The project owner may elect to comply with some or all of the requirements in this condition by providing funds to implement the requirements 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 (as set forth in the Security section of this condition, paragraph 3, above). If the actual cost of the acquisition, initial protection and habitat improvements, long-term funding or other cost 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, the long-term funding requirements as established in an approved PAR or PAR-like analysis, or the other actual costs that are estimated in the table. 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.

3. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFW 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 start of project related ground disturbance.

4. The project owner may request the CPM to provide it with all available information about any funds held by the Energy Commission, CDFW or NFWF as project security, or funds held in a NFWF sub-account for this project, or other project-specific account held by a third party. The CPM shall also fully cooperate with any independent audit that the project owner may choose to perform on any of these 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 verification to the CPM and CDFW that an approved Security has been established 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 CDFW of the form of the Security. The project owner, or an approved third party, shall complete and provide written verification to the CPM and CDFW 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 CDFW 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 and CDFW of such completion, no later than 18 months after the start of project related ground disturbance activities. If NFWF or another approved third party is being used for all or part of 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 CDFW 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, shall provide the CPM and CDFW with a management plan for the compensation lands associated with any phase of construction within180 days of the land or easement purchase, as determined by the date on the title. The CPM, in consultation with CDFW 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 and CDFW an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during Project construction. If this analysis shows that more lands were disturbed than was anticipated in this condition, the project owner shall provide the Energy Commission with additional compensation lands and funding commensurate with the added impacts and applicable

mitigation ratios set forth in this condition. A final analysis of all project related ground disturbance may not result in a reduction of compensation requirements if the deadlines established under this condition for transfer of compensation lands and funding have passed prior to completion of the analysis.

AMERICAN BADGER AND DESERT KIT FOX IMPACT AVOIDANCE AND MINIMIZATION MEASURES

BIO-21 Prior to ground disturbance the 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 250 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.

If present, occupied badger dens shall be flagged and ground-disturbing activities avoided within 50 feet of the occupied den avoided. Maternity dens shall be avoided during the pup-rearing season (15 February through 1 July) and a minimum 200-foot buffer established. Buffers may be modified with the concurrence of CDFW 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 by slowly excavating the burrow (either by hand or mechanized equipment under the direct supervision of the biologist, removing no more than 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 CDFW and CPM. A written report documenting the badger removal shall be provided to the CPM within 30 days of relocation.

Verification: The project owner shall submit a report to the CPM and CDFW 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 AVOIDANCE AND MINIMIZATION MEASURES

BIO-22 Prior to ground disturbance the project owner shall conduct a survey for roosting bats within 200 feet of project activities within 15 days prior to any

grading of rocky outcrops or removal of trees (particularly trees 12 inches in diameter or greater at 4.5 feet above grade with loose bark or other cavities).

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. Trees and rocky outcrops shall be surveyed by a qualified bat biologist Surveys shall include a minimum of one day and one evening. The biologist shall be approved by the Designated Biologist. If active maternity roosts or hibernacula are found, the rock outcrop or tree 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 CDFW/CPM-approved methods) for nearby alternative maternity colony sites. If the bat biologist determines in consultation with and with the approval of the CDFW, 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 roosts 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 near 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 CDFW and the CPM. Alternative roost sites must be of comparable size and proximal in location to the impacted colony. The CDFW 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 trees scheduled to be removed or in crevices in rock outcrops within the grading footprint, the individuals shall be safely evicted, 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 and CDFW 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-23 The project owner shall implement Best Management Practices and other measures described below to protect jurisdictional waters of the state occurring along the linear alignments. The project owner shall implement the following measures to minimize impacts to waters of the state:

1. Best Management Practices: The applicant shall comply with the following conditions:

    a. Prior to any activities that cross or have the potential to impact any jurisdictional drainage the owner shall provide a detailed map to the CDFW and CPM in a GIS format that identifies all potential crossings of jurisdictional habitats including bridges 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.

    b. Precautions to minimize turbidity/siltation shall be taken into account during project planning and shall be installed prior to construction. Precautions may also include placement of silt fencing, weed-free straw bales, or sand bags, so that silt or other deleterious materials are not allowed to pass to downstream reaches. The method used to prevent siltation shall be monitored and cleaned/repaired weekly.

    c. The project owner shall not operate vehicles or equipment in ponded or flowing water except as described in this condition. Diversion of any stream is not authorized. Bridging of Little Rock Wash is not authorized in this condition.

    d. Dewatering is not authorized in this condition.

    e. At the completion of construction all temporary bridges, culverts, or other structures shall be removed unless authorized by the CDFW and CPM.

    f. When any activity requires moving of equipment across a flowing stream, such operations shall be conducted without substantially increasing stream turbidity. The project owner shall bridge by the use

of railroad flat cars or other bridging material all ponded or flowing streams if vehicles where high flow levels occur.

g. Where drainages support sheet flow in direct response to rainfall for periods of less than 48 hours construction of bridges is not required. Vehicle use in these areas shall not result in silt/mud/turbid water from reaching downstream areas.

h. 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.

i. Any equipment or vehicles driven and/or operated within or adjacent to the stream/lake shall be checked and maintained daily, to prevent leaks of materials that if introduced to water could be deleterious to aquatic life.

j. 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. A biological monitor shall be present during the installation of all bridges, culverts and BMPs.

k. Installation of bridges or culverts shall be done in a manner that shall prevent pollution and/or siltation and which shall provide flows to downstream reaches. Flows to downstream reaches shall be provided during all times.

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

m. If turbidity/siltation levels resulting from project related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation, shall be halted until effective CPM approved control devices are installed, or abatement procedures are initiated.

n. 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.

o. If a stream’s low flow channel, bed or banks/lake bed or banks have been altered, these shall be returned as nearly as possible to their original configuration and width, without creating future erosion problems. The gradient of the streambed shall be returned to pre project grade unless such operation is part of a restoration project, in which case, the change in grade must be approved by the Department prior to project commencement.

p. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, construction waste, cement or concrete or washings thereof, asphalt, paint, oil or other petroleum products or any other substances which could be hazardous to aquatic life, or other organic or earthen material from any logging, construction, or other associated project related activity shall be allowed to contaminate the soil and/or enter into or placed where it may be washed by rainfall or runoff into, waters of the State. Any of these materials, placed within or where they may enter a stream or lake, by the owner or any party working under contract, or with the permission of the owner, shall be removed immediately.

q. 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 stream or lake.

r. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream/lake shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak. Clean up equipment such as extra boom, absorbent pads, skimmers, shall be on site prior to the start of dredging.

s. No equipment maintenance shall be done within or near any stream channel where petroleum products or other pollutants from the equipment may enter these areas under any flow.

t. The cleanup of all spills shall begin immediately. The CDFW and CPM shall be notified immediately by the owner of any spills and shall be consulted regarding clean-up procedures.

2. Non-native Vegetation Removal. The owner shall remove any non-native vegetation (tree tobacco, castor bean, etc.) from any drainage that requires the placement of a bridge, culvert or other structure. Removal shall be done at least twice annually (Spring/Summer) during implementation of the ~~PHPP~~ project. The removal of riparian vegetation is not authorized under this condition. Should the removal of riparian vegetation become necessary temporary impacts will be mitigated at a ratio of 2:1 and permanent impacts will be mitigated at a ratio of 5:1.

3. 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 CDFW office with copies of the CNDDB forms and survey maps. The CNDDB form is available online at: 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 CDFW and the CPM.

4. Notification: The project owner shall notify the CPM and CDFW, 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 and CDFW 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 and CDFW no later than seven days after the change of conditions is identified. As used here, change of condition refers to the process, procedures, and methods of operation of a project; the biological and physical characteristics of a project area; or the laws or regulations pertinent to the project, as 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.

5. Code of Regulations: The project owner shall provide a copy of 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 CDFW personnel or personnel from another agency upon demand. The CPM reserves the right to issue a stop work order or allow CDFW to

issue a stop work order after giving notice to the project owner and the CPM, if the CPM, in consultation with CDFW, determines that the project owner has breached any of the terms or conditions or for other reasons, including but not limited to the following:

a. The information provided by the applicant regarding streambed conditions 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 CDFW, determines that project activities will result in a substantial adverse effect on the environment.

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 above. 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. Compliance Reports shall be submitted every six months.

WILLOW FLYCATCHER MONITORING

BIO-24 The project owner shall prepare and implement a Willow Flycatcher Monitoring Plan to monitor willow flycatcher collisions with project transmission lines. Transmission line project-related Willow Flycatcher deaths or injuries shall be reported to the CPM, CDFW and USFWS.

The CPM, in consultation with CDFW and USFWS, shall determine if the Transmission project-related willow flycatcher deaths or injuries are in excess of the take estimate of willow flycatcher identified in the Incidental Take Permit or Consistency Determination issued by CDFW, and if so, whether this difference warrants imposing additional mitigation pursuant to Conditions of Certification BIO-26.

The Plan shall be approved by the CPM in consultation with CDFW and USFWS, and shall be incorporated into the project's BRMIMP and implemented. The Willow Flycatcher Monitoring Plan shall be based upon recent avian monitoring studies conducted at energy facilities 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 Plan 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 60 days prior to ground disturbance the project owner shall submit to the CPM, USFWS and CDFW a Willow Flycatcher Monitoring Plan. Modifications to the Plan shall be made only after approval from the CPM. For one year following the beginning of power plant operation, the Designated Biologist shall submit quarterly reports to the CPM, CDFW, and USFWS describing the methods, dates, durations, and results of willow flycatcher monitoring. The quarterly reports shall provide a detailed description of any Transmission Line project-related willow flycatcher 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 Transmission line project-related willow flycatcher fatalities or injuries detected, and provides recommendations for future monitoring. The Annual Report shall be provided to the CPM, CDFW, and USFWS. Quarterly reporting shall continue until the CPM, in consultation with CDFW and USFWS determine whether more years of monitoring are needed.

CLOSURE PLAN MEASURES

BIO-25 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 the Energy Commission staff to ensure sufficient funds are available for revegetation, reclamation, and decommissioning if the project site will not be re-powered or developed. The facility closure plan shall address biological resources-related mitigation measures. In addition to these measures, the plan shall 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 if the site will not be repowered or developed; and

5. A cost estimate to complete closure-related activities.

In addition, the project owner shall secure funding to ensure implementation of the plan and provide to the CPM written evidence of the dedicated funding mechanism(s).

Verification: 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 for comment by staff, CDFW, 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 within 90 days of the permanent closure or another period of time agreed to by the CPM.

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 (see the Conditions of Certification in the Compliance section of this Decision).

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 at a frequency determined by the CPM.

WILLOW FLYCATCHER MITIGATION

BIO-26 Prior to construction of the transmission line, the project owner shall provide to the CPM a copy of the Incidental Take Permit (ITP) per Section 2081 (b) of the California Endangered Species Act or Consistency Determination (CD) per Section 2080.1 of the California Endangered Species Act issued by the California Department of Fish and Wildlife (CDFW). The project owner shall secure compensatory lands to mitigate for the potential take of willow flycatcher and Southwestern willow flycatcher over the life of the project. The estimated take of the species will be determined through the ITP or CD issued by CDFW. Based on the mitigation ratios adopted for the Desert Renewable Energy Conservation Plan (Draft DRECP and EIS/EIR, Appendix H, Table H-7), the take of each bird death determined in the ITP/CD will require 5 acres of compensatory nesting habitat. All compensatory mitigation land needs to be within suitable breeding habitat within the California range of the willow flycatcher. The terms and conditions contained in the ITP or CD shall be incorporated into the project's Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP) and implemented by the project owner.

Verification: No less than 30 days prior to initial ground disturbance for the construction of the transmission line, the project owner shall provide to the CPM a copy of the ITP or CD issued by CDFW. Concurrently the project owner shall provide to the CPM for approval a copy of the revised BRMIMP that shall include the terms and conditions contained in the ITP or CD that must be implemented by the project owner. The CPM must approve the revised BRMIMP before construction activities can begin.

REVISED CONDITIONS FOR PARTIAL UNDERGROUND TRANSMISSION LINE ALTERNATIVE ROUTE 4

If the project owner opts to construct and operate Transmission Line Alternative Route 4, the following Revised Conditions of Certification **BIO-14**, **BIO-17**, and **BIO-20** reflect the reduced acreages subject to project impacts. The following **Biological Resources Tables** ~~3.2-5~~**4** **and** ~~3.2-6~~**5** shall apply to these Revised Conditions:

Biological Resources Table ~~3.2-5~~4
Swainson's Hawk Compensation Cost Estimate[1]

	Task	Cost per area	Cost
1.	Land Acquisition 70 acres at 2:1 ratio 140 acres	$10,000 per acre[2]	$1,400,000.00
2.	Level 1 Environmental Site Assessment	$3000 per parcel[3]	$6,990.00
3.	Appraisal	$5000 per parcel	$11,650.00
4.	Initial site work - clean-up, enhancement, restoration	$250 per acre[4]	$35,000.00
5.	Closing and Escrow Costs – 1 transaction includes landowner to 3rd party and 3rd party to agency	$5000 per transaction	$15,000.00
6.	Biological survey for determining mitigation value of land (habitat based with species specific augmentation)	$5000 per parcel	$11,650.00
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)	$140,000.00
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)	$210,000.00
	SUBTOTAL *- Acquisition & Initial Site Work*		*$1,830,290.00*
9.	Long-term Management and Maintenance (LTMM) Fund - includes land management; enforcement and defense of easement or title [short and long term]; monitoring….	$1450 per acre[5]	$203,000.00
	SUBTOTAL *- Acquisition, Initial Site Work, & LTMM*		$2,033,290.00
	NFWF Fees		
10.	Establish the project specific account	n/a (presumes establishment of Mohave ground squirrel account for project)	
11.	NFWF management fee for acquisition & initial site work	3% of SUBTOTAL	$60,998.70
12.	NFWF Management fee for LTMM Fund	1% of LTMM Fund	$2,030.00
13.	Call for and Process Pre-Proposal Modified RFP	n/a (presumes establishment of Mohave ground squirrel account for project)	
	TOTAL *for deposit in REAT-NFWF Project Specific Account*		$2,096,318.70

1. Estimates prepared in consultation with **CDFW**. All costs are best estimates as of fall 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. Based on mean of data provided by **CDFW** for land acquisition in Los Angeles County. 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, an average parcel is 60 acres (based on input from DFG).
4. Based on information from **CDFW**.
5. 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.

Biological Resources Table ~~3.2-6~~5
Mohave Ground Squirrel Compensation Cost Estimate[1]

	Task	Cost per area	Cost
1.	Land Acquisition (total of 140 acres) 2:1 ratio on power plant site Compensatory mitigation is not required for the transmission line right-of-way	$10,000 per acre[2]	$1,400,000.00
2.	Level 1 Environmental Site Assessment	$3000 per parcel[3]	$6,990.00
3.	Appraisal	$5000 per parcel	$11,650.00
4.	Initial site work - clean-up, enhancement , restoration	$250 per acre[4]	$35,000.00
5.	Closing and Escrow Costs – 1 transaction includes landowner to 3rd party and 3rd party to agency	$5000 per transaction	$15,000.00
6.	Biological survey for determining mitigation value of land (habitat based with species specific augmentation)	$5000 per parcel	$11,650.00
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)	$140,000.00
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)	$210,000.00
	SUBTOTAL *- Acquisition & Initial Site Work*		*$1,830,290.00*
9.	Long-term Management and Maintenance (LTMM) Fund - includes land management; enforcement and defense of easement or title [short and long term]; monitoring….	$1450 per acre[5]	$203,000.00
	SUBTOTAL *- Acquisition, Initial Site Work, & LTMM*		*$2,033,290.00*
	NFWF Fees		
10.	Establish the project specific account	$12,000	$12,000.00
11.	NFWF management fee for acquisition & initial site work	3% of SUBTOTAL	$60,998.70
12.	NFWF Management fee for LTMM Fund	1% of LTMM Fund	$2,030.00

13.	Call for and Process Pre-Proposal Modified RFP	$30,000	$30,000.00
	***TOTAL** for deposit in REAT-NFWF Project Specific Account*		$2,138,318.70

1. Estimates prepared in consultation with **CDFW**. All costs are best estimates as of fall 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. Based on mean of data provided by **CDFW** for land acquisition in Los Angeles County. 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, an average parcel is 60 acres (based on input from **CDFW**).
4. Based on information from **CDFW**.
5. 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.

RAVEN FEE, MONITORING, MANAGEMENT, AND CONTROL PLAN

ALTERNATIVE BIO-14 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, CDFW, 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 CDFW. 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 REAT Regional Raven Management Program. The project owner shall submit payment to the project sub-account of the REAT Account held by the National Fish and Wildlife Foundation (NFWF) to support the REAT Regional Raven Management Program. The amount shall be a one-time payment of $105 per acre (125.5 acres) of permanent disturbance fee $13,177.00.

Verification: No later than 30 days prior to any construction-related ground disturbance activities, the Project owner shall provide the CPM, USFWS, and CDFW 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 CDFW. No later than 60 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. 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.

SWAINSON'S HAWK HABITAT COMPENSATORY MITIGATION

ALTERNATIVE BIO-17 The project owner shall either assume that Swainson's hawk nest within five miles of the project site and provide compensatory mitigation as described below or complete CFDG protocol surveys within five miles of project facilities that result in permanent impacts to Swainson's hawk foraging habitat. If surveys are completed they shall include the following components.

The survey periods shall follow a specified schedule: Period I occurs from 1 January to 31 March, Period II occurs from 1 April to 30 April, Period III occurs from 1 may to 30 May, and Period IV occurs from 1 June to 15 July. No fewer than three surveys per period in at least two survey periods shall be completed immediately prior to the start of project construction. All nest sites shall be recorded, mapped using GIS and provided to the CPM and CDFW. Compensatory mitigation at a 2:1 ratio shall be required for permanent impacts. If active Swainson's hawk nests (i.e., any nest active within five years) are not detected within 5 miles of the project site or linear facilities, the project owner will not be required to provide compensatory mitigation.

If the project owner assumes presence, the project owner shall provide compensatory mitigation acreage for 600 acres of Swainson's hawk habitat lands, adjusted to reflect the final project footprint, as specified in this condition. In addition, the project owner shall provide funding for initial improvement and long-term maintenance, enhancement, and management of the acquired lands for protection and enhancement Swainson's hawk populations, and comply with other related requirements of this condition.

a. Loss of foraging habitat for Swainson's hawks shall be mitigated by providing Habitat Management (HM) lands at a ratio of 2:1 for any foraging habitat impacted within a 5-mile radius of active Swainson's hawk nest(s) CDFW considers a nest active if it was used one or more times within the last 5 years). Foraging habitat includes but is not limited to alfalfa; fallow fields; beet, tomato, onions, and other low-growing row or field crops; dry-land and irrigated pasture; and cereal grain crops (including corn after harvest). Joshua tree woodland shall be considered foraging habitat in the Antelope Valley.

b. Lands which are currently in urban use or lands that have no existing or potential value for foraging Swainson's hawks will not require mitigation. The project owner will provide the CPM and CDFW a report of potential foraging lands impacted by the proposed project as determined by consultation with the CDFW and recent site-specific surveys conducted by a CDFW-qualified raptor biologist.

This acreage was calculated as follows: a ratio of 2:1 for the ~~PHPP~~ power plant site (600 acres). Costs of these requirements are estimated to be $1,327,210.00 (see Biological Resources Tables 4- for a complete breakdown of costs and acreage). All costs are best estimates as of fall 2010. Actual costs will be determined at the time of the transactions and may change the funding needed to implement the required mitigation obligation based on changing land costs or management fees. Regardless of the estimates, the project owner is responsible for providing adequate funding to implement the required mitigation.

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 Palmdale Hybrid Power Plant Project Site.

This compensation acreage may be included ("nested") within the acreage acquired and managed as Mohave ground squirrel habitat compensation (Condition of Certification BIO-20) only if:

a. A minimum of 140 acres of habitat including a minimum of 76 acres of Joshua tree woodland, 64 acres of Mojave creosote bush scrub.

b. The Mohave ground squirrel 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 the required number of acres of Swainson's hawk 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 this condition.

The project owner shall provide financial assurances as described below in the amount of $2,033,290.00. In lieu of acquiring lands itself, the Project owner may satisfy the requirements of this condition by depositing funds into a Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described below. If the Project owner elects to establish a REAT NFWF Account and have NFWF and the agencies complete the required habitat compensation, then the total estimated cost of complying with this condition is $2,096,318.70. The amount of security or NFWF deposit shall be adjusted up or down to reflect any revised cost estimates recommended by REAT.

The actual costs to comply with this condition will vary depending on the final footprint of the project, the 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 or similar analysis (below). The 100 acre habitat requirement, and associated funding requirements based on that acreage, shall be adjusted up or down if there are changes in the final footprint of the project or the associated costs of evaluation, acquisition, management, and other factors listed in Biological Resources Tables 4. Regardless of actual cost, the project owner shall be responsible for funding all requirements of this condition.

COMPENSATORY MITIGATION LAND ACQUISITION

1. Method of Acquisition. Compensation lands shall be acquired by either of the two options listed below. Regardless of the method of acquisition, the transaction shall be complete only upon completion of all terms and conditions described in this Condition of Certification.

    a. The project owner shall acquire lands and transfer title and/or conservation easement to a state or federal land management agency or to a third-party non-profit land management organization, as approved by the CPM in consultation with CDFW; or

    b. The Project owner shall deposit funds into a project-specific subaccount within the REAT Account established with the NFWF, in the amount as indicated in Biological Resources Tables ~~5~~4 (adjusted to reflect final project footprint and any applicable REAT adjustments to costs).

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

    a. Be within the Western Mojave Desert;

b. Provide moderate to good quality foraging habitat for Swainson's hawk with capacity to improve in quality and value for this species; and

c. Be near lands for which there is reasonable evidence (for example, recent (<15 years) CNDDB occurrences on or immediately adjacent to the proposed lands) suggesting current occupation by Swainson's hawk ideally with populations that are stable, recovering, or likely to recover.

d. 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;

e. not have a history of intensive recreational use or other disturbance that might cause future erosional damage or other habitat damage, and 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 that cannot be removed to the extent that the site could not provide suitable habitat; and

h. have water and mineral rights included as part of the acquisition, unless the CPM, in consultation with CDFW, agrees in writing to the acceptability of land without these rights.

3. 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 Swainson's hawk in relation to the criteria listed above and must be approved by the CPM. The CPM will share the proposal with and consult with CDFW before deciding whether to approve or disapprove the proposed acquisition.

4. Compensation Lands Acquisition Conditions: The project owner shall comply with the following conditions relating to acquisition of the compensation lands after the CPM, in consultation with CDFW 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 CDFW. 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 CDFW. Any transfer of a conservation easement or fee title must be to CDFW, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to other public agency approved by the CPM in consultation with CDFW. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFW or another entity approved by the CPM. If an approved non-profit holds a conservation easement, CDFW shall be named a third party beneficiary. If an entity other than CDFW holds a conservation easement over the compensation lands, the CPM may require that CDFW or another entity approved by the CPM, in consultation with CDFW, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM, in consultation with CDFW, of the terms of any transfer of fee title or conservation easement to the compensation lands.

c. 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 CDFW, before it can be used to establish funding levels or management activities for the compensation lands.

5. Compensation Lands Acquisition Costs: The Project owner shall pay all other costs related to acquisition of compensation lands and conservation easements. In addition to actual land costs, these acquisition costs shall include but shall not be limited to the items listed below. Management costs including site cleanup measures are described separately, in the following section.

a. Level 1 Environmental Site Assessment;

b. Appraisal;

c. Title and document review costs;

d. Expenses incurred from other state, federal, or local agency reviews;

e. Closing and escrow costs;

f. Overhead costs related to providing compensation lands to CDFW or an approved third party;

g. Biological survey(s) to determine mitigation value of the land; and

h. Agency costs to accept the land (e.g., writing and recording of conservation easements; title transfer).

COMPENSATORY MITIGATION LAND IMPROVEMENT

1. Land Improvement Requirements: The Project owner shall fund activities that the CPM, in consultation with the CDFW, 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 surveys of boundaries and property lines, installation of signs, trash removal and other site cleanup measures, construction and repair of fences, invasive plant removal, removal of roads, 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, CDFW or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFW, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFW takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFW or its designee.

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 and enhance habitat for desert tortoise. Management activities may include maintenance of signs, fences, removal of invasive weeds, monitoring, security and enforcement, and control or elimination of unauthorized use.

2. Long-term Management Plan. The project owner shall pay for the preparation of 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 CDFW.

3. Long-Term Maintenance and Management Funding. 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 $203,000.00 calculated at $1,450 an acre for each compensation acre, as shown in Biological Resources Tables ~~5~~4 (above) into an account for long-term maintenance and management of compensation lands. 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 CDFW before deciding whether to approve an entity to hold the project's long-term maintenance and management funds on any lands. The CPM, in consultation with the project owner and CDFW, may 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 CDFW takes fee title to the compensation lands, CDFW shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity such as NFWF to manage the long-term maintenance and management fee for CDFW and with CDFW 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. 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 CDFW designed to protect or improve the habitat values of the compensation lands.

ii. Withdrawal of Principal. The long-term maintenance and management fee principal shall not be drawn upon unless such withdrawal is deemed necessary by the CPM, in consultation with CDFW, or the approved

third-party long-term maintenance and management fee manager to ensure the continued viability of the species on the compensation lands. If CDFW takes fee title to the compensation lands, monies received by CDFW pursuant to this provision shall be deposited in a special deposit fund established solely for the purpose to manage lands in perpetuity unless CDFW designates NFWF or another entity to manage the long-term maintenance and management fee for CDFW.

iii. Pooling 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 CDFW and CPM.

iv. Reimbursement Fund. The project owner shall provide reimbursement to CDFW 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.

COMPENSATORY MITIGATION LAND SECURITY

1. Compensation Mitigation Security: The project owner shall provide security sufficient for funding acquisition, improvement, and long-term management of Swainson's hawk compensation land. 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 CDFW of the form of the Security.

   The security amount shall be based on the estimates provided in Biological Resources Tables 4. This amount shall be updated and verified prior to payment and shall be adjusted to reflect actual costs or more current estimates as agreed upon by the REAT agencies.

   The Project owner shall provide verification that financial assurances have been established to the CPM with copies of the document(s) to CDFW, 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 described in Section A of this condition.

   In the event that the project owner defaults on the Security, 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. 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.

Security for the requirements of this condition shall be provided in the amount of $2,096,318.70 if the project owner elects to use the REAT Account with NFWF pursuant to paragraph 4 of this condition, below). The Security is calculated in part from the items that follow but adjusted as specified below (consult Biological Resources Tables 4 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 $10,000/acre;

ii. Site assessments, appraisals, biological surveys, transaction closing and escrow costs, calculated as $18,000 total per parcel (presuming 60 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.

2. The project owner may elect to comply with some or all of the requirements in this condition by providing funds to implement the requirements 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 (as set forth in the Security section of this condition, paragraph 3, above). If the actual cost of the acquisition, initial protection and habitat improvements, long-term funding or other cost 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, the long-term funding requirements as established in an approved PAR or PAR-like analysis, or the other actual costs that are estimated in the table. 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.

3. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFW 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. The project owner may request the CPM to provide it with all available information about any funds held by the Energy Commission, CDFW or NFWF as project security, or funds held in a NFWF sub-account for this project, or other project-specific account held by a third party. The CPM shall also fully cooperate with any independent audit that the project owner may choose to perform on any of these funds.

Verification: The project owner shall provide the CPM with either the results of the nesting surveys or written verification that the project owner shall assume presence no less than 60 days prior to ground disturbance or site mobilization. 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 verification to the CPM and CDFW that an approved Security has been established 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 CDFW of the form of the Security. The project owner, or an approved third party, shall complete and provide written verification to the CPM and CDFW 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 ground-disturbing project activities, the project owner shall submit a formal acquisition proposal to the CPM describing the parcel(s) intended for purchase, and shall obtain approval from the CPM, in consultation with CDFW 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 and CDFW of such completion, no later than 18 months after the issuance of the Energy Commission Decision.

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 CDFW 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, shall provide the CPM and CDFW 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 CDFW 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 and CDFW an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during Project construction. If this analysis shows that more lands were disturbed than was anticipated in this condition, the project owner shall provide the Energy Commission with additional compensation lands and funding commensurate with the added impacts and applicable mitigation ratios set forth in this condition. A final analysis of all project related ground disturbance may not result in a reduction of compensation requirements if the deadlines established under this condition for transfer of compensation lands and funding have passed prior to completion of the analysis.

MOHAVE GROUND SQUIRREL HABITAT COMPENSATORY MITIGATION

ALTERNATIVE BIO-20 The project owner shall provide compensatory mitigation acreage of 140 acres of Mohave ground squirrel habitat lands, adjusted to reflect the final project footprint, as specified in this condition. In addition, the project owner shall provide funding for initial improvement and long-term maintenance, enhancement, and management of the acquired lands for protection and enhancement Mohave ground squirrel populations, and comply with other related requirements of this condition.

This mitigation ratio is based on a 2:1 ratio for the power plant site. Costs of these requirements are estimated to be $2,033,290.00 (see Biological Resources Table 5 for a complete breakdown of costs and acreage). All costs are best estimates as of fall 2010. Actual costs will be determined at the time of the transactions and may change the funding needed to implement the required mitigation obligation based on changing land costs or management fees. Regardless of the estimates, the project owner is responsible for providing adequate funding to implement the required mitigation.

In lieu of acquiring lands itself, the project owner may satisfy the requirements of this condition by depositing funds into a Renewable Energy Action Team (REAT) Account established with the National Fish and Wildlife Foundation (NFWF), as described below. If the Project owner elects to establish a REAT NFWF Account and have NFWF and the agencies complete the required habitat compensation, then the total estimated cost of complying with this condition is $2,138,318.70. The amount of security or NFWF deposit shall be adjusted up or down to reflect any revised cost estimates recommended by REAT.

The actual costs to comply with this condition will vary depending on the final footprint of the project, the 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 or similar analysis (below). The 140 acre habitat requirement, and associated funding requirements based on that acreage, shall be adjusted up or down if there are changes in the final footprint of the project or the associated costs of evaluation, acquisition, management, and other factors listed in Biological Resources Table 5. Regardless of actual cost, the project owner shall be responsible for funding all requirements of this condition.

COMPENSATORY MITIGATION LAND ACQUISITION

1. Method of Acquisition. Compensation lands shall be acquired by either of the two options listed below. Regardless of the method of acquisition, the transaction shall be complete only upon completion of all terms and conditions described in this Condition of Certification.
    a. The project owner shall acquire lands and transfer title and/or conservation easement to a state or federal land management agency or to a third-party non-profit land management organization, as approved by the CPM in consultation with CDFW; or

    b. The project owner shall deposit funds into a project-specific subaccount within the REAT Account established with the NFWF, in the amount as indicated in Biological Resources Table 5 (adjusted to reflect final project footprint and any applicable REAT adjustments to costs).

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

    a. Be in the western Mojave Desert;

    b. Provide moderate to good quality habitat for Mohave ground squirrel with capacity to improve in quality and value for this species;

    c. Be a contiguous block of land (preferably) or located so they result in a contiguous block of protected habitat;

d. Be adjacent to larger blocks of lands that are already protected, or be in a location approved by the CDFW, such that there is connectivity between the acquired lands and the protected lands;

e. Be connected to lands for which there is reasonable evidence (for example, recent [<15 years] CNDDB occurrences on or immediately adjacent to the proposed lands) suggesting current occupation by Mohave ground squirrel, ideally with populations that are stable, recovering, or likely to recover;

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

g. 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

h. Not be encumbered by easements or uses that would preclude fencing of the site or preclude or unacceptably constrain management of the site for the primary benefit of the species and their habitat for which mitigation lands were secured.

3. 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 Mohave ground squirrel in relation to the criteria listed above and must be approved by the CPM. The CPM will share the proposal with and consult with CDFW before deciding whether to approve or disapprove the proposed acquisition.

4. Compensation Lands Acquisition Conditions: The project owner shall comply with the following conditions relating to acquisition of the compensation lands after the CPM, in consultation with CDFW 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 CDFW. 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 CDFW. Any transfer of a conservation easement or fee title must be to CDFW, a non-profit organization qualified to hold title to and manage compensation lands (pursuant to California Government Code section 65965), or to other public agency approved by the CPM in consultation with CDFW. If an approved non-profit organization holds fee title to the compensation lands, a conservation easement shall be recorded in favor of CDFW or another entity approved by the CPM. If an approved non-profit holds a conservation easement, CDFW shall be named a third party beneficiary. If an entity other than CDFW holds a conservation easement over the compensation lands, the CPM may require that CDFW or another entity approved by the CPM, in consultation with CDFW, be named a third party beneficiary of the conservation easement. The Project owner shall obtain approval of the CPM, in consultation with CDFW, of the terms of any transfer of fee title or conservation easement to the compensation lands.

c. 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 CDFW, before it can be used to establish funding levels or management activities for the compensation lands.

5. Compensation Lands Acquisition Costs: The Project owner shall pay all other costs related to acquisition of compensation lands and conservation easements. In addition to actual land costs, these acquisition costs shall include but shall not be limited to the items listed below. Management costs including site cleanup measures are described separately, in the following section.

   a. Level 1 Environmental Site Assessment;

   b. Appraisal;

   c. Title and document review costs;

   d. Expenses incurred from other state, federal, or local agency reviews;

   e. Closing and escrow costs;

   f. Overhead costs related to providing compensation lands to CDFW or an approved third party;

   g. Biological survey(s) to determine mitigation value of the land; and

   h. Agency costs to accept the land (e.g., writing and recording of conservation easements; title transfer).

COMPENSATORY MITIGATION LAND IMPROVEMENT

1. Land Improvement Requirements: The Project owner shall fund activities that the CPM, in consultation with the CDFW 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 surveys of boundaries and property lines, installation of signs, trash removal and other site cleanup measures, construction and repair of fences, invasive plant removal, removal of roads, 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, CDFW or another public agency may hold and expend the habitat improvement funds if it is qualified to manage the compensation lands (pursuant to California Government Code section 65965), if it meets the approval of the CPM in consultation with CDFW, and if it is authorized to participate in implementing the required activities on the compensation lands. If CDFW takes fee title to the compensation lands, the habitat improvement fund must be paid to CDFW or its designee.

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 and enhance habitat for desert tortoise. Management activities may include maintenance of signs, fences, removal of invasive weeds, monitoring, security and enforcement, and control or elimination of unauthorized use.

2. Long-term Management Plan. The project owner shall pay for the preparation of 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 CDFW.

3. Long-Term Maintenance and Management Funding. 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 $203,000.00 calculated at $1,450 an acre for each compensation acre, as shown in Biological Resources Table 5

(above) into an account for long-term maintenance and management of compensation lands. 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 CDFW before deciding whether to approve an entity to hold the project's long-term maintenance and management funds on any lands. The CPM, in consultation with the project owner and CDFW, may 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 CDFW takes fee title to the compensation lands, CDFW shall determine whether it will hold the long-term management fee in the special deposit fund, leave the money in the REAT Account, or designate another entity such as NFWF to manage the long-term maintenance and management fee for CDFW and with CDFW 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. 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 CDFW designed to protect or improve the habitat values of the compensation lands.

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

iii. Pooling 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 CDFW and CPM.

iv. Reimbursement Fund. The project owner shall provide reimbursement to CDFW 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.

COMPENSATORY MITIGATION LAND SECURITY

1. Compensation Mitigation Security: The project owner shall provide security sufficient for funding acquisition, improvement, and long-term management of desert tortoise compensation land. 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 CDFW of the form of the Security.

   The security amount shall be based on the estimates provided in Biological Resources Table 5**.** This amount shall be updated and verified prior to payment and shall be adjusted to reflect actual costs or more current estimates as agreed upon by the REAT agencies.

   The Project owner shall provide verification that financial assurances have been established to the CPM with copies of the document(s) to CDFW, 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 described in Section A of this condition.

   In the event that the project owner defaults on the Security, 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. 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.

   Security for the requirements of this condition shall be provided in the amount of $2,138,318.70 if the project owner elects to use the REAT Account with NFWF pursuant to paragraph 4 of this condition, below). The Security is calculated in part from the items that follow but adjusted as specified below (consult Biological Resources Table 5 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 $10,000/acre;

ii. Site assessments, appraisals, biological surveys, transaction closing and escrow costs, calculated as $18,000 total per parcel (presuming 60 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; and

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.

2. The project owner may elect to comply with some or all of the requirements in this condition by providing funds to implement the requirements 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 (as set forth in the Security section of this condition, paragraph 3, above). If the actual cost of the acquisition, initial protection and habitat improvements, long-term funding or other cost 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, the long-term funding requirements as established in an approved PAR or PAR-like analysis, or the other actual costs that are estimated in the table. 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.

3. The responsibility for acquisition of compensation lands may be delegated to a third party other than NFWF, such as a non-governmental organization supportive of desert habitat conservation, by written agreement of the Energy Commission. Such delegation shall be subject to approval by the CPM, in consultation with CDFW 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 start of project related ground disturbance.

4. The project owner may request the CPM to provide it with all available information about any funds held by the Energy Commission, CDFW or NFWF as project security, or funds held in a NFWF sub-account for this project, or other project-specific account held by a third party. The CPM shall also fully cooperate with any independent audit that the project owner may choose to perform on any of these 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 verification to the CPM and CDFW that an approved Security has been established 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 CDFW of the form of the Security. The project owner, or an approved third party, shall complete and provide written verification to the CPM and CDFW 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 CDFW 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 and CDFW of such completion, no later than 18 months after the start of project related ground disturbance activities. If NFWF or another approved third party is being used for all or part of 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 CDFW 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, shall provide the CPM and CDFW with a management plan for the compensation lands associated with any phase of construction within180 days of the land or easement purchase, as determined by the date on the title. The CPM, in consultation with CDFW 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 and CDFW an analysis, based on aerial photography, with the final accounting of the amount of habitat disturbed during Project construction. If this analysis shows that more lands were disturbed than was anticipated in this condition, the project owner shall provide the Energy Commission with additional compensation lands and funding commensurate with the added impacts and applicable mitigation ratios set forth in this condition. A final analysis of all project related ground disturbance may not result in a reduction of compensation requirements if the deadlines established under this condition for transfer of compensation lands and funding have passed prior to completion of the analysis.

CULTURAL CONDITIONS OF CERTIFICATION

Staff has included the conditions of certification from the Final Decision below. Staff is proposing changes to Condition of Certification **CUL-6** to include mitigation measures in the event that damage to the California Aqueduct, PPP or other ancillary facilities of the Aqueduct cannot be avoided.

CUL-1 Prior to the start of ground disturbance (includes "preconstruction site mobilization, "construction-related ground disturbance," and "construction-related 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 projects licensed by the Energy Commission. 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 project owner shall submit the resumes and qualifications for the CRS, CRS alternates, and all technical specialists to the CPM for review and approval. 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 additional 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 of 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 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 there is no alternate CRS in place to conduct the duties of the CRS, a previously approved 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 additional letters to the CPM identifying the CRMs and attesting to their qualifications.

5. At least 10 days prior to any technical specialists 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, all supplements, and the Energy Commission's Final Staff Assessment (FSA) 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., 1:2000 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 days prior to the start of ground disturbance, the project owner shall provide the AFC, data responses, confidential cultural resources documents, all

supplements, and the Energy Commission FSA 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 construction-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 Prior to the start of ground disturbance, the project owner shall submit the Cultural Resources Monitoring and Mitigation Plan (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. A mitigation plan shall be prepared for any CRHR-eligible (as determined by the CPM) resource, impacts to which cannot be avoided. A prescriptive treatment plan may be included in the CRMMP for limited data types.

3. Specification of the implementation sequence and the estimated time frames needed to accomplish all construction-related tasks during the ground disturbance and post-ground–disturbance analysis phases of the project.

4. 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. 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. 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 construction-related effects.

7. 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. 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. 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. A statement demonstrating when and how the project owner will comply with Health and Human Safety Code 7050.5(b) and Public Resources Code 5097.98(b) and (e).

11. 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-4 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) 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 construction-related reports.

CUL-5 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-6 The project owner shall ensure that the CRS, alternate CRS, or CRMs monitor full time all construction-related ground disturbance along the linear facilities routes, at laydown areas, roads, and other ancillary areas, and on those parts of the project site that the geo-archaeological report identified as representing a terrace landform (having a high archaeological sensitivity) to ensure there are no impacts to undiscovered resources and to ensure that known resources are not impacted in an unanticipated manner, including the Palmdale Ditch.

The project owner shall ensure that no damage to the Palmdale Ditch occurs during project construction. If the Palmdale Ditch is damaged in any way, including but not limited to disturbance of the masonry of the bridge and culverts, disturbance of the earthen profile or course, or disturbance of the tunnel mouth, the project owner shall submit to the CPM a plan for the recordation of the impacted parts of the ditch or features by an architectural historian who meets the U.S. Secretary of the Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61). The recordation shall meet the standards of the Historic American Engineering Record.

The project owner shall ensure that no damage to the California Aqueduct, Pearblossom Pumping Plant or other ancillary facilities of the resource (Aqueduct) occurs during project construction. If the Aqueduct would be damaged in a way that would change the eligibility of the resource, including but not limited to damage to the following character-defining features: its design as related to topography and natural features, the trapezoidal shape, the concrete lining and the ancillary infrastructure such as pumping plants and dams, the project owner shall submit to the CPM a plan for the recordation of the impacted parts of the aqueduct or features by an architectural historian who meets the U.S. Secretary of the Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61). The recordation shall meet the standards of the Historic American Engineering Record Level I. This

documentation should be completed in accordance with the Guidelines for Architectural and Engineering Documentation, published by the Department of the Interior-National Park Service, in the Federal Register/Volume 68, No. 139/Monday, July 21, 2003/Notices, pp. 43159 to 43162.

Full-time archaeological monitoring for this project shall be the archaeological monitoring of the earth-removing activities in the areas specified in the first paragraph of this condition, 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 are 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 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. Immediately upon a CRM recognizing that project construction will impact the Palmdale Ditch or any associated features in an unanticipated and adverse manner, the project owner shall submit to the CPM for review and approval a plan for the recordation of the impacted parts of the ditch or features. The plan shall be prepared by an architectural historian who meets the U.S. Secretary of the Interior's Professional Qualifications Standards, as published in Title 36, Code of Federal Regulations, part 61 (36 C.F.R., part 61). The recordation shall be conducted by such a qualified architectural historian and shall meet the standards of the Historic American Engineering Record.

4. 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.

5. 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.

6. 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.

7. 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.

8. 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-7 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. If the discovery includes human remains, the project owner shall comply with the requirements of Health and Human Safety Code 7050.5(b) and (c). Monitoring and daily reporting as provided in these 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 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.

3. 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.

CUL-8 If fill soils must be acquired from a non-commercial borrow site or disposed of to a non-commercial disposal site, unless less-than-five-year-old surveys of these sites for archaeological resources are documented to and approved by the CPM, the CRS shall survey the borrow and/or disposal site/s for cultural resources and record on DPR 523 forms any that are identified. When the survey is completed, the CRS shall convey the results and recommendations for further action to the project owner and the CPM, who will determine what, if any, further action is required. If the CPM determines that significant archaeological resources that cannot be avoided are present at the borrow site, other Conditions shall apply. The CRS shall report on the methods and results of these surveys in the final CRR.

Verification:

1. As soon as the project owner knows that a non-commercial borrow site and/or disposal site will be used, he/she shall notify the CRS and CPM and provide documentation of previous archaeological survey, if any, dating within the past five years, for CPM approval.

In the absence of documentation of recent archaeological survey, at least 30 days prior to any soil borrow or disposal activities on the non-commercial borrow and/or disposal

sites, the CRS shall survey the site/s for archaeological resources. The CRS shall notify the project owner and the CPM of the results of the cultural resources survey, with recommendations, if any, for further action

HAZMAT CONDITIONS OF CERTIFICATION

Existing Hazardous Materials Management Conditions of Certification will be sufficient to reduce impacts from the proposed PEP to a less than significant level. Staff recommends that the following conditions be modified, deleted, or added to reflect the elimination of Therminol heat transfer fluid, the provision of a revised list of hazardous materials, security requirements, and the updating of Energy Commission standard conditions. All other Conditions remain the same.

HAZ-1 During commissioning and operations, the project owner shall not use any hazardous materials not listed in Appendix B, below from the Revised Petition to Amend (PHPP 2015d) or in greater quantities than those identified by chemical name in Appendix B, unless approved in advance by the Compliance Project Manager (CPM). All inert gases are exempt from this requirement. Paints, thinners, laboratory reagents, and herbicides in amounts less than 20 gallons or 20 pounds are exempt from this requirement unless containing a chemical at any amount which is regulated as an extremely hazardous chemical pursuant to 40 CFR Part 355 Appendix A, or is required by the Compliance Project Manager (CPM) to be listed based upon its toxic, flammable, combustible, caustic, or explosive nature.

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 provide a Hazardous Materials Business Plan (HMBP), a Spill Prevention, Control, and Countermeasure Plan (SPCC), and a Risk Management Plan (RMP) to the Health Hazardous Materials Division of the Los Angeles County Fire Department (HHMDLACFD) and the CPM for review. After receiving comments from the HHMDLACFD and the CPM, the project owner shall reflect all recommendations in the final documents. Copies of the final plans shall then be provided to the HHMDLACFD for information and to the CPM for approval.

Verification: At least thirty (30) days prior to receiving any hazardous material on the site for commissioning or operations, the project owner shall provide a copy of a final (or revised, if appropriate) HMBP and SPCC Plan to the CPM for approval.

At least thirty (30) days prior to delivery of aqueous ammonia to the site, the project owner shall provide the final RMP to the HHMDLACFD for information and to the CPM for approval.

HAZ-3 The project owner shall develop and implement a Safety Management Plan for delivery of aqueous ammonia and other liquid and gaseous hazardous materials by tanker truck. 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 including provisions to maintain lockout control by a power plant employee not involved in the delivery or transfer operation. This plan shall be applicable during construction, commissioning, and operation of the power plant.

Verification: At least 30 days prior to the delivery of any liquid or gaseous hazardous material via tanker truck to the facility, the project owner shall provide a Safety Management Plan as described above to the CPM for review and approval.

HAZ-4 The aqueous ammonia storage facility shall be designed to the ASME Pressure Vessel Code. In either case, the storage tank shall be protected by a secondary containment basin capable of holding 125 percent of the storage volume or the storage volume plus the volume associated with 24 hours of rain assuming the 25-year storm and shall contain High Density Polyethylene (HDPE) plastic balls that would float and cover the entire surface in the event of a release of aqueous ammonia from the storage tank into the secondary containment area. These balls shall be inspected annually and any cracked or otherwise damaged balls replaced immediately.

In addition, the pad where the tanker truck will transfer aqueous ammonia to the storage tank shall be bermed and sloped to direct spilled aqueous ammonia to flow to a grated area that would lead to a subsurface sump. The final design drawings and specifications for the ammonia storage tank, transfer pad and its subsurface sump, and secondary containment basin shall be submitted to the CPM.

Verification: At least 30 days prior to the start of construction of the aqueous ammonia storage and transfer facility, the project owner shall submit final design drawings and specifications for the ammonia storage tank, ammonia pumps, pipes, valves, and detectors, the transfer pad and its subsurface sump, and the storage tank secondary containment basin to the CPM for review and approval.

In the Annual Compliance Report, the project owner shall include a report on the annual HDPE ball inspection and how many damaged balls were replaced.

HAZ-5 The project owner shall direct all vendors delivering aqueous ammonia to the site to use only tanker truck transport vehicles which meet or exceed the specifications of DOT Code MC-307.

Verification: At least 30 days prior to receipt of aqueous ammonia on site, the project owner shall submit copies of the notification letter to supply vendors indicating the transport vehicle specifications to the CPM for review and approval.

HAZ-6 The project owner shall direct all vendors delivering any hazardous material to the site for use during commissioning and commercial operations to use only the route approved by the CPM. Trucks and tankers will travel on SR-14 and exit onto East Avenue M and from which they will enter the plant site via the access road. If the route must be changed for any reason, the project owner shall obtain the review and approval of the CPM not later than ten (10) days before the next shipment of hazardous materials is due to arrive at the

facility and shall notify the Los Angeles County Fire Department at the same time a request for route change is submitted to the CPM.

Verification: At least 30 days prior to receipt of any hazardous materials on site, the project owner shall submit copies of the required transportation route limitation direction to the CPM for review and approval. Any change to the route must be reviewed and approved by the CPM and must be made in writing not less than ten (10) days prior to the next shipment of hazardous materials to the facility.

HAZ-8 At least 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, incident, or emergency; and

6. Evacuation procedures.

Verification: At least 30 days prior to commencing construction, the project owner shall notify the CPM that a site-specific Construction Security Plan is available for review and approval.

HAZ-9 The project owner shall prepare a site-specific Security Plan for the operational phase and shall notify the CPM that it is available on-site 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 as below (as per NERC 2011).

The Operation Security Plan shall include the following:

1. Permanent full perimeter fence or wall, at least eight feet high and topped with a wire obstacle (e.g.: barbed wire or barbed tape) around the entire site and meet the requirements specified in Condition of Certification BIO-11.

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, incident, 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. A statement(s) (refer to sample, attachment “C”) signed by the owners or authorized representative of aqueous ammonia transport vendors certifying that they have prepared and implemented security plans in conformity with 49 CFR 172.802, and that they have conducted employee background investigations in accordance with 49 CFR Part 1572, subparts A and B;

9. ~~(~~CCTV~~)~~ monitoring system able to pan, tilt, and zoom (PTZ), recordable, and viewable in the power plant control room and security station (if separate from the control room) providing a view of the entire perimeter fence line, main entrance gate, the entrance to the control room, and the ammonia storage tank but angled and physically restricted so as to not view or record any activity at Air Force Plant 42; and

10. Additional measures to ensure adequate perimeter security consisting of either:

    a. Security guard(s) present 24 hours per day, seven days per week, **or**

    b. Power plant personnel on-site 24 hours per day, seven days per week and:

       1) The perimeter fence around the entire site shall be viewable by the CCTV system; and

2) have perimeter breach detectors **or** on-site motion detectors for all fence lines.

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 (e.g., transformers, gas lines, compressors, etc.) 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 Corporation after consultation with appropriate law enforcement agencies and the applicant.

Verification: At least 30 days prior to the initial receipt of hazardous materials onsite, 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, and that the plan remains current or that it has been revised in any manner. If revised, the project owner shall notify the CPM that the revised Operations Security Plan is available for review and approval.

Also, 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-10 The project owner shall not allow any fuel gas pipe cleaning activities on site at any power Unit, either before placing the pipe into service or at any time during the lifetime of the facility, that involve “flammable gas blows” where natural (or flammable) gas is used to blow out debris from piping and then vented to atmosphere. Instead, an inherently safer method involving a non-flammable gas (e.g. air, nitrogen, steam) or mechanical pigging shall be used as per NFPA 56. A written procedure shall be developed and implemented as per NFPA 56, section 4.3.1

Verification: At least 30 days before any fuel gas pipe cleaning activities begin at any Unit, the project owner shall submit a copy of the Fuel Gas Pipe Cleaning Work Plan (as described in NFPA 56, section 4.3.1) which shall indicate the method of cleaning to be used, what gas will be used, the source of pressurization, and whether a mechanical PIG will be used, to the CBO for information and to the CPM for review and approval

LAND USE CONDITIONS OF CERTIFICATION

Existing Conditions of Certification **LAND-1**, **LAND-2**, and **LAND-3**, and the addition of **LAND-4** would be sufficient to reduce impacts from the proposed amendment to a less than significant level and ensure the project remains in compliance with applicable laws, ordinances, regulations, and standards.

LAND-1 The project owner shall coordinate with property owners of farmland that is actively in production within the proposed transmission line right-of-way. The purpose of this coordination is to: (1) schedule construction activities at a location and time when damage to agricultural operations would be minimized to the extent practicable; and (2) ensure that any areas damaged or disturbed by construction are restored to a condition that closely approximates conditions that existed prior to construction-related disturbance, to the extent practicable.

This includes avoiding construction during peak planting, growing, and harvest seasons, if feasible, based on transmission line outage limitations. If damage or destruction occurs, the applicant shall perform restoration activities on the disturbed area in order to return the area to a condition that closely approximates conditions that existed prior to construction-related disturbance. This could include activities such as soil preparation, regrading, and reseeding.

Verification: The project owner shall document coordination efforts with affected agricultural landowners, and shall submit this documentation to the CPM at least 30 calendar days prior to the start of construction activities on the affected agricultural parcels. In addition, the project owner shall document any plans for restoration activities prior to construction and document any actual restoration activities it conducts post completion of the restoration. The project owner shall submit the documentation of restoration plans to the CPM at least 30 calendar days prior to the start of construction activities on the affected agricultural parcels. The project owner shall submit the documentation of the actual restoration activities that occurred to the CPM no later than 30 calendar days after the completion of construction activities on the affected agricultural parcels.

LAND-2 The project owner shall ensure that the proposed transmission line and natural gas pipeline will be constructed and operated in compliance with the city of Palmdale's Zoning Ordinance, Chapter 2, Article 21 (Site Plan Review). The project owner shall submit a Site Plan Review to the city of Palmdale in sufficient time for review and comment, and to the Compliance Project Manager (CPM) for review and approval prior to the start of transmission line construction. The Site Plan Review shall be in compliance with the review process set forth by Chapter 2, Article 21 (Site Plan Review) of the city's Zoning Ordinance in order to ensure that the physical plans for the project are compatible with neighboring developments, are appropriate for the site, and achieve the highest level of design that is feasible for the project.

Verification: At least 90 calendar days prior to the start of construction of the transmission line and natural gas pipeline, including any demolition, grading, trenching, or site remediation, the project owner shall submit the site plan to the city of Palmdale for review and comment and to the CPM for review and approval. The project owner shall also provide the CPM with a copy of the transmittal letter to the city of Palmdale.

At least 30 calendar days prior to the start of construction, the project owner shall provide copies of any revisions to the site plan received from the city of Palmdale, along with any changes to the proposed site plan, to the CPM for review and approval.

LAND-3 The project owner shall dedicate an easement within, or adjacent to, the project transmission line corridor for the Avenue S Connector Trail as required by Los Angeles County's Antelope Valley Trails Master Plan and as requested by Los Angeles County's Department of Parks and Recreation. The easement to be dedicated by the project owner shall be a minimum of a 12-foot wide trail easement from the western edge of parcel #AIN3039011005 to the eastern edge of parcel #AIN3039006021.

Verification: The project owner shall coordinate the dedication of a portion of the project transmission line corridor to the county of Los Angeles for development of the Avenue S Connector Trail easement as approved by the Compliance Project Manager (CPM) within 180 days of the start of construction. The project owner shall provide documentation to the CPM that the dedication of the trail easement has been executed based on mutually agreed upon provisions between the project owner and the Los Angeles County's Department of Parks and Recreation, while ensuring safety and security of trail users. The documentation also shall guarantee that the easement would be located in the area specified by the county (a 12 foot wide trail easement from the western edge of parcel #AIN3039011005 to the eastern edge of parcel #AIN3039006021). The project owner shall provide to the CPM updates in the Annual Compliance Report on the status of easement dedication.

LAND-4 The project owner shall enter into a Franchise Agreement with the County of Los Angeles for the following portions of the transmission line that will cross County of Los Angeles public roadways:

- Two crossings over the Sierra Highway
- Four crossings over the Angeles Forest Highway
- One crossing over Vincent View Road

Verification: At least 15 days prior to construction of any of the crossings identified above, the project owner shall provide a copy of the approved Franchise Agreement(s) with Los Angeles County to the CPM.

NOISE AND VIBRATION CONDITIONS OF CERTIFICATION

NOISE-1 At least 15 days prior to the start of ground disturbance, the project owner shall notify all residents within one-half mile of the site and one-quarter mile of the linear facilities, 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-mentioned 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-mentioned 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 PHPP, the project owner shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The project owner or authorized agent shall:

1. use the Noise Complaint Resolution Form (below), or a functionally equivalent procedure acceptable to the CPM, to document and respond to each noise complaint;

2. attempt to contact the person(s) making the noise complaint within 24 hours;

3. conduct an investigation to determine the source of noise related to the complaint;

4. take all feasible measures to reduce the noise at its source if the noise is project related; and

5. 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 five 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 three-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 operation of the project will not cause noise levels due solely to plant operation to exceed an average of ~~40~~42 dBA L_{eq} measured at Measurement Location ML 1, near the residence identified as R2 in **Noise and Vibration Figure 2**. No new pure-tone components may be caused by the project. No single piece of equipment shall be allowed to stand out as a source of noise that draws legitimate complaints.

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 residential locations to determine the presence of pure tones or other dominant sources of plant noise.

A. When the project first achieves a sustained output of 85 percent or greater of rated capacity, the project owner shall conduct a community noise survey at Measurement Location ML 1 or at closer locations acceptable to the CPM. This survey shall be performed during power plant operation and shall also include measurement of one-third octave band sound pressure levels to determine whether new pure-tone noise components have been caused by the project.

B. If the results from the noise survey indicate that the power plant average noise level (L_{eq}) at Measurement Location ML 1 exceeds the above value, mitigation measures shall be implemented to reduce noise to a level of compliance with this limit.

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's first achieving a sustained output of 85 percent 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 85 percent 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 and noisy construction work relating to any project features shall be restricted to the times of day delineated below:

Monday through Friday: 6:00 a.m. to 6:00 p.m.

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.

STEAM BLOW RESTRICTIONS

NOISE-7 If a high-pressure steam blow is employed, the project owner shall equip steam blow piping with a temporary silencer that quiets the noise of steam blows to no greater than 92 dBA measured at a distance of 50 feet. The project owner shall conduct steam blows only during the hours of 8:00 a.m. to 5:00 p.m.

Verification: At least 15 days prior to the first steam blow, the project owner shall submit to the CPM drawings or other information describing the temporary steam blow silencer and the noise levels expected and a description of the steam blow schedule.

SOCIOECONOMICS CONDITIONS OF CERTIFICATION

Staff has proposed the addition of Condition of Certification **SOCIO-1** as shown below.

SOCIO-1 Prior to the start of project construction, the project owner shall pay the one-time statutory school facility development fee to the Lancaster Elementary School District and the Antelope Valley Union High School District as required by Education Code Section 17620.

Verification: At least 30 days prior to the start of project construction, the project owner shall provide to the Compliance Project Manager (CPM) proof of payment to the Lancaster Elementary School District and Antelope Valley Union High School District of the statutory development fee.

Soil & Water resources Conditions of Certification

Conditions of Certification with respect to soil and water resources are proposed under Conditions of Certification **SOIL&WATER-1** through **SOIL&WATER-9** of this section.

Soil and Water Table 10
Summary of Recommended Modifications to Conditions of Certification

Condition of Certification	Recommended Modifications
SOIL&WATER-1	DRAINAGE, EROSION, AND SEDIMENT CONTROL PLAN: Minor change to update the owner name.
SOIL&WATER-2	CONSTRUCTION – STORM WATER POLLUTION PREVENTION PLAN: Minor change to make consistent with current law.
SOIL&WATER-3	WATER SUPPLY – PLANT CONSTRUCTION: Changed the water supply quality to tertiary-treated recycled water. Changed the recycled water supplier. Minor change to update the owner name.
SOIL&WATER-4	WATER SUPPLY – PLANT OPERATION: Modified the quality of recycled water supplied. Changed the recycled water supplier. Changed to require a copy of the recycled water agreement with the city of Palmdale. Minor change to update the owner name. Changed to require a new water supply acquisition agreement between the project owner and District 40 and a Will-Serve letter issued by District 40 for the PEP potable water supply as a pre-requisite to construction.
SOIL&WATER-5	WATER METERING: Included a new provision for recording the volume of recycled water trucked to PEP. Changed the start date of the reporting year. Minor change to update the owner name.
SOIL&WATER-6	HYDROSTATIC TEST WATER DISCHARGE REQUIREMENTS: Minor change to update the owner name. Called-out an acronym.
SOIL&WATER-7	ZERO LIQUID DISCHARGE SYSTEM REQUIREMENTS: Deleted due to change in power plant design petition to amend (PHPP 2015c).
SOIL&WATER-8	WASTEWATER COLLECTION SYSTEM REQUIREMENTS: Minor change to update the owner name.
SOIL&WATER-9	SEWER SERVICE CONNECTION: Minor change to update the owner name.

DRAINAGE, EROSION, AND SEDIMENTATION CONTROL PLAN

SOIL & WATER-1: Prior to site mobilization, the project owner shall obtain the Compliance Project Manager's (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 Compliance Project Manager (CPM) to conduct a review of the 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 condition of certification in the Facility Design section and shall contain the following elements:

Vicinity Map: A map shall be provided indicating the location of all project elements (including service utilities and the generator transmission line) with depictions of all significant geographic features to include watercourses, washes, irrigation and drainage canals, major utilities, and sensitive areas.

Site Delineation: The site and all project elements (including service utilities and the generator transmission line) 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 vicinity map. All maps shall be presented at a legible scale

Drainage: The DESCP shall include the following elements:

a. Topography. Topography for offsite areas are 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 Best Management Practices (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 and areas to be preserved. 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 project for both road and non-road surfaces including specifically identifying all chemical based dust palliatives, soil bonding, and weighting agents appropriate for use at the 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.

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.

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 Los Angeles, California Department of Fish and Wildlife (CDFW), 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.

Verification: The DESCP shall be consistent with the grading and drainage plan as required by Condition of Certification **CIVIL-1**, and shall be approved by the chief building official (CBO) and (CPM). In addition, the project owner shall do all of the following:

a. No later than sixty (60) days prior to start of site mobilization, the project owner shall submit a copy of the DESCP to the city of Palmdale, County of Los Angeles, and the RWQCB for review and comment. The CBO and CPM shall consider the comments received from the city of Palmdale, County of Los Angeles, and RWQCB in their approval of the DESCP.

b. During construction, the project owner shall provide a monthly compliance report on the effectiveness of the drainage, erosion, and sediment control measures and the results of monitoring and maintenance activities. Reporting the effectiveness shall include a table listing: (1) each drainage, erosion, and sediment control measure; (2) the monitoring frequency of the drainage, erosion, and sediment control measure; and (3) the maintenance performed, if any, to that measure during the monthly reporting period.

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.

d. Provide the CPM with two (2) copies each of all monitoring or other reports required for compliance with Los Angeles County, CDFG, and RWQCB.

CONSTRUCTION – STORM WATER POLLUTION PREVENTION PLAN

SOIL&WATER-2: The project owner shall fulfill the requirements contained in State Water Resources Control (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWG, as Modified by 2010-0014-DWQ, NPDES No. CAS000002 and all subsequent revisions and amendments. The project owner shall develop and implement a construction Storm Water Pollution Prevention Plan (SWPPP) for the construction of the project.

Verification: Thirty (30) days prior to site mobilization, the project owner shall submit the construction SWPPP to the CBO and CPM for approval. A copy of the approved construction SWPPP shall be kept accessible onsite at all times.

WATER SUPPLY – CONSTRUCTION WATER

SOIL&WATER-3: The project proposed use of recycled water during construction for dust control and soil compaction shall be disinfected tertiary treated recycled water supplied by the city of Palmdale. Use of this recycled water shall meet the requirements of CCR Title 22, Division 4, Chapter 3 and Title 17; the project owner shall provide the CPM two (2) copies of the executed agreement between the applicant and city of Palmdale for the supply of recycled water. This agreement shall specify all terms and costs for the receipt and use of recycled water. The project shall not use recycled water from District No. 20 for project construction until this agreement is executed.

Verification: No later than sixty (60) days prior to construction, the project owner shall submit two (2) copies of the executed agreement for the supply and onsite use of disinfected tertiary-treated recycled water ~~from~~ supplied by the city of Palmdale ~~-~~for project construction.

If construction water is provided by a pipeline connected to the Palmdale WRP, then the project owner shall submit to the CPM two (2) copies of the Engineering Report and Cross Connection inspection report and include all comments from the Lahontan RWQCB and the California Department of Public Health (DPH) prior to the delivery of recycled water from District No. 20.

WATER SUPPLY – OPERATION WATER

SOIL&WATER-4: Recycled water from Los Angeles County Sanitation District shall be used for all allowable project construction needs. The project's use of water for project operations shall be potable water from the Los Angeles County Department of Public Works (LACDPW) for drinking and sanitation and tertiary-treated recycled water from the city of Palmdale for industrial use. Use of recycled water shall comply with CCR Title 22, and Title 17. The project owner shall provide the CPM a copy of an agreement demonstrating the city of Palmdale is committed to delivery of recycled water.

As a pre-requisite to construction, the project owner shall provide the CPM a copy of the valid potable water supply agreement between the project power and District 40 demonstrating the necessary fees are paid and District 40 is committed to delivery of potable water by the start of project construction date.

Verification: No later than ninety (90) days prior to construction, the project owner shall provide a copy of the valid water supply agreement for potable water supply from District 40.

No later than ninety (90) days prior to construction, the project owner shall provide a copy of the executed agreement with city of Palmdale for the recycled water supply.

No later than sixty (60) days prior to operation, the project owner shall submit the Engineering Report and Cross Connection inspection report for the recycled water supply to the Lahontan RWQCB, California Department of Public Health (DPH), and CBO. The project owner shall submit to the CPM two (2) copies of the Engineering Report and Cross Connection inspection report and include all comments from the Lahontan RWQCB and California DPH prior to accepting delivery of recycled water.

No later than thirty (30) days after project construction, the project owner shall submit a report showing how much recycled water was used for construction, the type of recycled water, and what activities it was used for.

WATER METERING

SOIL&WATER-5: Prior to the connection to a potable or recycled water service, the project owner shall install and maintain metering devices as part of the water supply and distribution system to monitor and record the volume of potable and recycled water supplied to the project. The metering devices shall be operational for the life of the project.

If recycled water is trucked to the project, the project owner shall keep daily logs of the volume of recycled water in each truckload delivered to the project.

A semi-annual summary of the project construction daily maximum, monthly average, monthly total, and annual total water use, differentiating between potable and recycled water, shall be submitted; to the CPM in the annual compliance report.

An annual summary of the project operation daily maximum, monthly average, monthly total, and annual total water use, differentiating between potable and recycled water, shall be submitted; to the CPM in the annual compliance report.

The daily and monthly water use shall be reported; in gallons per day, and the semi-annual and annual water use shall be reported in acre-feet per year. For calculating the total water use, the term “year” begins on January 1.

Verification:

1. At least sixty (60) days prior to use of any water source for project construction and operation, the project owner shall submit to the CPM evidence that metering devices have been installed and are operational on the potable and recycled pipelines serving the project construction and operation. The project owner shall provide a report on the servicing, testing, and calibration of the metering devices in the annual compliance report.

2. Beginning six (6) months after the start of construction, the project owner shall prepare a semi-annual summary of the daily maximum, monthly average, monthly total, and annual total amount of water used for construction purposes.

3. Annually, the project owner shall prepare a summary of the daily maximum, monthly average, monthly total, and annual total water use.

HYDROSTATIC TEST WATER DISCHARGE REQUIREMENTS

SOIL&WATER-6: The **project** owner shall discharge all hydrostatic test water in accordance with the NPDES permit. The project owner shall comply with (LACSD) Wastewater Ordinance requirements for appropriate management of these discharges.

VERIFICATION: PRIOR TO THE DISCHARGE OF HYDROSTATIC TEST WATER INTO THE LACSD SEWER SYSTEM, THE PROJECT OWNER SHALL DO ALL OF THE FOLLOWING:

1. Analyze both carbon and non-carbon steel piping test water in accordance with LACSD specified analyses prior to discharge or disposal of the test water;

2. Submit those analyses together with a tabulated summary of the analytical results and corresponding acceptable limits to the CPM for review and the LACSD for approval and a copy to the CBO. If discharge to the sewer system is approved by the LACSD, include a copy of the approval letter in the annual compliance report.

3. If discharge of either the carbon or non-carbon steel piping test water to the sewer system is not approved by the LACSD, then submit a copy of the disposal receipt issued by a water treatment plant in the annual compliance report.

SOIL&WATER-7: Deleted per staff analysis of petition to amend (PHPP 2015c)

WASTEWATER COLLECTION SYSTEM REQUIREMENTS

SOIL&WATER-8: The project owner shall recycle and reuse all process wastewater streams to the extent practicable. Prior to transport and disposal of any facility operation wastewaters that are not suitable for treatment and reuse onsite, the project owner shall test and classify the stored wastewater to determine proper management and disposal requirements. The project owner shall ensure that the wastewater is transported and disposed of in accordance with the wastewater's characteristics and classification and all applicable LORS (including any CCR Title 22 Hazardous Waste and Title 23 Waste Discharges to Land requirements).

Verification: In the annual compliance report, the project owner shall provide the CPM with a report of test results of any wastewater that is not suitable for treatment and reuse onsite, the classification of this wastewater, and documentation of the proper management and disposal of this wastewater, including but not limited to non-hazardous and hazardous waste manifest.

SEWER SERVICE CONNECTION

SOIL&WATER-9: Prior to commercial operation, the project owner shall provide the CPM and the County of Los Angeles Sanitation District No. 20 (Palmdale WRP) all information and documentation required to satisfy LACSD No. 20 Wastewater Ordinance, Master Ordinance and Rate and Mean Loadings Ordinance for the discharge of sanitary wastewater into the LACSD No. 20 sewer system. During operation, any monitoring reports provided to LACSD No. 20 shall also be provided to the CPM. The CPM shall be notified of any violations of discharge limits or amounts.

Verification: At least sixty (60) days prior to commercial operation, the project owner shall submit the information and documentation required to satisfy LACSD No. 20 Wastewater Ordinance, Master Ordinance and Rate and Mean Loadings Ordinance for review and comment, and to the CPM and the CBO for review and approval.

During project operation, the project owner shall submit any wastewater quality monitoring reports required by LACSD No. 20 to the CPM in the annual compliance report. The project owner shall submit any notice of violations from LACSD No. 20 to the CPM within ten (10) days of receipt and fully explain the corrective actions taken in the annual compliance report.

TRAFFIC & TRANSPORTATION CONDITIONS OF CERTIFICATION

TRANS-1 The project owner shall prepare and implement a construction traffic control plan. The traffic control plan must include but not be limited to the following issues:

- Schedule construction activities such that traffic will arrive and depart from the power plant site during non-peak traffic hours to the extent practicable taking into consideration Condition **AQ-SC-6**. During the months of October through March when such scheduling may not be feasible, prepare and distribute a map showing acceptable access routes to the plant site that avoid the SR-14 / Avenue M interchange during peak hours, such as SR-14 to Avenue L east to Sierra Highway south on Sierra Highway to Avenue M and east to the power plant site;
- Make improvements to East Avenue M (e.g. turn and acceleration/deceleration lanes) consistent with the existing project access features to allow for safe arrival/departure to/from the project site;
- Limit heavy equipment and building materials deliveries between 9:30 am and 3:30 pm, per Palmdale General Plan Circulation Element, to minimize impacts and route truck traffic around residential development;
- Provide signing, lighting, and traffic control device placement during construction impacting regional and local roadways;
- Ensure construction traffic avoids using the SR-14 on and off-ramps to East Avenue M and the intersection of Sierra Highway and East Avenue M during peak morning and afternoon traffic periods;
- Traffic diversion plans (in coordination with the cities of Palmdale and Lancaster) to ensure access during temporary lane/road closures;
- Ensure access for emergency vehicles to the project site;
- Ensure pedestrian and bicycle safety from construction vehicle travel routes and any construction-related temporary travel lane closures or disruptions;
- Temporary closure of travel lanes or disruptions to street segments and intersections during reconductoring activities or any other utility tie-ins;
- Establish a parking plan for workers, construction vehicles, and trucks during transmission line and pipeline construction;
- Installation of the natural gas pipeline and water line to occur during nonpeak hours; and
- Use flagging, flag men, signage, and cover open trenches when needed; and
- All road paving activities shall comply with engineering design standards for road development pursuant to guidelines mandated by the Public Works Departments of the City of Palmdale and the County of Los Angeles as appropriate.

Verification: At least 90 days prior to the start of site mobilization, the project owner shall submit a traffic control plan that outlines each component above to Caltrans and the cities of Palmdale and Lancaster Planning Departments for review and comment and to the Compliance Project Manager (CPM) for review and approval. The project owner shall provide the CPM with any comments from Caltrans and the cities of Palmdale and Lancaster.

TRANS-2 The project owner shall obtain Determinations of No Hazard to Navigable Airspace from the Federal Aviation Administration (FAA) for U.S. Air Force Plant 42 regarding the project's transmission towers, HRSG structure, HRSG stack, combustion turbine enclosures, combustion turbine air inlet filters, combustion turbine oil skid and coolers, steam turbine generator step-up transformer, air cooled condenser, steam turbine generator enclosure, low pressure steam turbine, steam turbine building and construction crane that would penetrate Plant 42's airspace, unless the FAA determines that any of these structures are exempt from the requirements for obtaining a Determination of No Hazard to Navigable Airspace pursuant to Title 14, CFR, Part 77, Section 77.9 e (1)

Verification: At least 90 days prior to the construction, the project owner shall provide the CPM copies of the FAA Determinations of No Hazard to Navigable Airspace regarding the project structures identified above or FAA's Determination that a structure is exempt from the requirements for obtaining a Determination of No Hazard to Navigable Airspace and the project owner must comply with specific recommendations contained in the FAA determinations.

TRANS-3 The project owner shall comply with Caltrans and other relevant jurisdictions' limitations on vehicle sizes and weights used during construction and operation. In addition, the project owner or its contractor shall obtain necessary transportation permits from Caltrans and all relevant jurisdictions for roadway use.

Verification: 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-4 Pilot Notification and Awareness

The project owner shall initiate the following actions to ensure pilots are aware of the project location and potential hazards to aviation:

(a) Submit a letter to the FAA requesting a Notice to Airmen (NOTAM) be issued advising pilots of the location of the power plant and recommending avoidance of overflight of the project site below 1,500 feet AGL. The letter shall also request that the NOTAM be maintained in active status until all navigational charts and Airport Facility Directories (AFDs) have been updated.

(b) Submit a letter to the FAA requesting a power plant depiction symbol be placed at the power plant site location on the Los Angeles Sectional Chart with a notice to “avoid overflight below 1,500 feet AGL”.

(c) Submit a request to and coordinate with the USAF Plant 42 Commander to add a new remark to the Automated Surface Observing System (ASOS) identifying the location of the power plant and advising pilots to avoid direct overflight below 1,500 feet AGL as they approach or depart the airport.

(d) Request the project owner shall submit aerodrome remarks describing the location of the power plant and advising against direct overflight below 1,500 feet AGL to:

1. FAA Airport/Facility Directory - Southwest U.S.

2. Jeppesen (Airway Manual Services –Western U.S. Airport Directory)

3. Airguide Pilot's Guide to California Airports

(e) Install one, non-blinking red aviation obstruction light on each of the project’s two, 160-foot tall HRSG stacks, both ends of the 135-foot tall air cooled condenser, and at each corner of the power block area.

Verification: No later than 60 days prior to the start of construction, the project owner shall submit draft language for the letters of request to the FAA (including Southern California TRACON) and Plant 42 to the CPM for review and approval.

Within 60 days after CPM approval of draft language for the letter of request to the FAA (including Southern California TRACON), the project owner shall submit the required letters of request to the FAA and request that Southern California TRACON submit aerodrome remarks to the listed agencies. The project owner shall submit copies of these requests to the CPM. A copy of any resulting correspondence shall be submitted to the CPM within 10 days of receipt. The letters should request a response within 30 days which should include a timeline for implementing the suggested remarks in identified publications and designation on the chart mentioned above. If the FAA does not respond within 30 days, the project owner shall contact the CPM.[6]

TRANS-5 The project owner shall repair any damage to roadways affected be construction activity along with the primary roadways identified in the traffic control plan for construction related traffic to the road’s pre-project construction condition.

Verification: At least 90 days prior to the start of site mobilization, the project owner shall photograph, videotape, or digitally record images of the roadways that will be affected by any underground utility connection construction and heavy construction traffic. The project owner shall provide the CPM, Chief Building Official (CBO) or delegate and the cities of Palmdale and Lancaster with a copy of the images for the

[6] The Energy Commission does not have the authority to compel issuance of a NOTAM or require the FAA or U.S. Air Force Plant 42 to publish the location of or remarks regarding the project in any aviation chart or guide, or add that information to the U.S. Air Force Plant 42 ASOS.

roadway segments under its jurisdiction. Also prior to start of construction, the project owner shall notify the cities about the schedule for project construction. The purpose of this notification is to postpone any planned roadway resurfacing and/or improvement projects until after the project construction has taken place and to coordinate construction-related activities associated with other projects.

Within 30 days prior to the commencement of project operations, the project owner shall meet with the CBO and the cities of Palmdale and Lancaster to determine the actions necessary and schedule the repair of identified sections of public roadways and restore the right-of-way (ROW) to original or as near-original condition as possible. Following completion of any road improvements, the project owner shall provide to the CPM and CBO comment letters from the cities of Palmdale and Lancaster stating whether the work completed within public rights-of-way meets city standards. If the CPM and CBO determine that additional work is needed to meet city standards, the CPM will direct the project owner to complete the additional work.

TRANS-6 The project owner shall provide emergency access that complies with the city of Palmdale General Plan Circulation Element and requirements of the Los Angeles County Fire Department.

Verification: At least 90 days prior to the start of construction, the project owner shall provide plans to the Los Angeles County Fire Department and Palmdale Public Works Department for review and comment, and the CPM and CBO for review and approval, which demonstrate that emergency access will be provided in compliance with city of Palmdale and Los Angeles County Fire Department standards. The project owner shall provide the CPM with any comment letters received from the city of Palmdale and/or Los Angeles County Fire Department. Adequate emergency access shall be provided prior to the start of project operations.

TRANS-7 The project owner shall ensure that all necessary permits and/or licenses are secured from the U.S. Department of Transportation, California Highway Patrol, Caltrans and the cities of Palmdale and Lancaster for the transport of hazardous materials.

Verification: 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.

Appendix TT-1: Plume Velocity Analysis

Testimony of Nancy Fletcher

INTRODUCTION

The following analysis assesses exhaust stack plume vertical velocities of the proposed PEP, CTGs, HRSGs, and ACC exhaust plumes. Staff completed calculations to determine the worst-case vertical plume velocities at different heights above the ground based on the project owner's proposed facility design, with staff corrections to some of the operational data. The purpose of this appendix is to provide documentation of the method used to estimate worst-case vertical plume velocity estimates to assist evaluation of the project's impacts on aviation safety in the vicinity of the PEP.

SUMMARY OF THE DECISION

On August 10, 2011, the Energy Commission approved the Palmdale Hybrid Power Plant (PHPP), a 570 MW (nominal output) hybrid of a natural gas-fired combined-cycle generating equipment integrated with solar thermal generating equipment. The Final Commission Decision (CEC 2011b) for the PHPP evaluated the potential for thermal plumes to be generated from the two HRSG stacks and a ten-cell cooling tower. The Final Commission Decision concluded the turbine and cooling tower could generate thermal plumes with velocities exceeding the 4.3 m/s threshold up to a height of 990 feet above ground level for the HRGS and 875 feet above ground level for the cooling tower.

PROJECT DESCRIPTION

The proposed PEP would be a natural-gas-fired, combined-cycle, air-cooled electrical generating facility located in the city of Palmdale in the Antelope Valley. The PEP power block would consist of two 214 MW Siemens SGT6-5000F combustion turbines with inlet evaporative cooling and dry low NOx combustors, one 276 MW (nominal base load) Siemens steam turbine, and two heat recovery steam generators (HRSGs) with duct burners. The PEP would employ dry cooling through an air cooled condenser (ACC). The PEP would also include a 110 MMbtu/hr natural gas fired auxiliary boiler, two emergency engines and other ancillary equipment.

PLUME VELOCITY CALCULATION METHOD

SPILLANE APPROACH

Staff uses a calculation approach from a technical paper (Best 2003) to estimate the worst-case plume vertical velocities for vertical turbulence from plumes such as the PEP stacks and cooling system. The calculation approach, known as the "Spillane approach", is based on calm wind conditions to assess average plume vertical velocity as a function of height. Calm wind conditions are considered the worst-case wind conditions for worst case plume rise and velocities. The Spillane approach uses the

following equations to determine vertical velocity for single stacks during dead calm wind (i.e., wind speed = 0) conditions:

(1) $(V*a)^3 = (V*a)_o^3 + 0.12*F_o*[(z-z_v)^2-(6.25D-z_v)^2]$

(2) $(V*a)_o = V_{exit}*D/2*(T_a/T_s)^{0.5}$

(3) $F_o = g*V_{exit}*D^2*(1-T_a/T_s)/4$

(4) $Z_v = 6.25D*[1-(T_a/T_s)^{0.5}]$

Where: V = vertical velocity (meters per second [m/s]), plume-average velocity

a = plume top-hat radius (m, increases at a linear rate of $a = 0.16*(z- z_v)$

F_o= initial stack buoyancy flux m^4/s^3

z = height above stack exit (m)

z_v= virtual source height (m)

V_{exit}= initial stack velocity (m/s)

D = stack diameter (m)

T_a= ambient temperature (K)

T_s= stack temperature (K)

g = acceleration of gravity (9.8 m/s^2)

Individual plumes can be broken into three stages. The first stage describes plume conditions close to the stack exit where the plume momentum remains relatively unaffected by ambient and plume buoyancy conditions. This momentum rise stage describes the plume as it travels to a height of 6.25D. In the second stage, the plume responds to differences between ambient and plume buoyancy conditions. Cooler and less turbulent ambient air interacts with the plume and impacts the plume's vertical velocity. The dilution of the stack exhaust is sensitive to ambient wind speed. Therefore the calm wind conditions are considered to be conservative and yield worst case conditions. In the third stage, the plume rise is largely impacted by the buoyancy of the plume and continues until turbulence within and outside the plume equalizes. This generally takes place at large heights and distances form the stack where the plume vertical velocity is close to zero.

Equation (1) is solved for V at any given height above stack exit that is above the momentum rise stage for single stacks (where z > 6.25D) and at the end of the plume merged stage for multiple plumes. This solution provides the plume-average velocity for the area of the plume at a given height above stack exit; the peak plume velocity would be two times higher than the plume-average velocity predicted by this equation. The stack buoyancy flux (Equation 3) is a prominent part of Equation (1). The calm condition

calculation basis represents the worst-case conditions, and the vertical velocities will decrease substantially as wind speeds increase.

For multiple stack plumes, where the stacks are equivalent as is the case for PEP, the multiple stack plume velocity during calm winds is calculated by staff in a simplified fashion, presented in the Best Paper as follows:

(5) $V_m = V_{sp} * N^{0.25}$

Where: V_m = multiple stack combined plume vertical velocity (m/s)

V_{sp} = single plume vertical velocity (m/s), calculated using Equation (1)

N = number of stacks

This simplified multiple stack plume velocity calculation method predicts somewhat lower velocity values than the full Spillane approach methodology for multiple plumes as given in data results presented in the Best paper (Best 2003). However, for a long linear set of plumes, such as the ACC grid designed for the PEP, it is very unlikely that all plumes can merge fully to allow this velocity given the stack separation and the height/atmospheric conditions needed for them to fully merge. Therefore the use of this approach will likely over predict the combined plume velocities in this case.

MITRE EXHAUST PLUME ANALYZER

On September 24, 2015, the FAA released a guidance memorandum (FAA 2015) recommending that thermal plumes be evaluated for air traffic safety. FAA determined that the overall risk associated with thermal plumes in causing a disruption of flight is low. However, it determined that such plumes in the vicinity of airports may pose a unique hazard to aircraft in critical phases of flight (such as take-off and landing). In this memorandum a new computer model, different than the analysis technique used by staff and identified above as the Spillane Approach, is used to evaluate vertical plumes for hazards to light aircraft. It was prepared under FAA funding and available for use in evaluating exhaust plume impacts.

This new model, the MITRE Corporation's Exhaust Plume Analyzer (MITRE 2012), was identified by the FAA as a potentially effective tool to assess the impact that exhaust plumes may impose on flight operations in the vicinity of airports (FAA 2015). The Exhaust Plume Analyzer was developed to evaluate aviation risks from large thermal stacks, such as turbine exhaust stacks. The model provides output in the form of graphical risk probability isopleths ranging from 10^{-2} to 10^{-7} risk probabilities for both severe turbulence and upset conditions for four different aircraft sizes. However, at this time the Exhaust Plume Analyzer model cannot be used to provide reasonable risk predictions on variable exhaust temperature thermal plume sources, such as cooling towers and air cooled condensers.

The FAA has not provided guidance on how to evaluate the risk probability isopleth output of the Exhaust Plume Analyzer model, but states in their memorandum that they intend to update their guidance on near-airport land use, including evaluation of thermal exhaust plumes, in fiscal year 2016. However, MITRE Corporation is suggesting that a

probability of severe turbulence at an occurrence level of greater than 1 x 10^{-7} (they call this a Target Safety Level) should be considered potentially significant. This is equivalent to one occurrence of severe aircraft turbulence in 10 million flights. For the past 50 years, the MITRE Corporation has provided air traffic safety guidance to FAA, and their recommended Target Safety Level is based on this experience (MITRE 2016).

Additionally, the MITRE model has a probability of occurrence plot limitation. While it provides output for predict plumes up to a maximum height of 3,500 feet above ground, the meteorological data that is used by the model is currently limited to a maximum height of 3,000 feet. Outputs corresponding to the higher altitudes simply reuse the 3,000 foot meteorological data. The model was developed with the assumption that a plume would not rise higher than 3,000-3,500 feet above ground level, and therefore the modeling output was terminated at that height. There is uncertainty if there will be any effort to expand the data set and model to work properly at altitudes above 3,000 feet above ground level at this point. The results obtained by staff using the Spillane approach suggest that this limitation would not apply to the PEP.

At this time staff does not believe the MITRE model should be used for final work products until the significance threshold is verified by the FAA and the model capabilities are enhanced to include other thermal plume sources such as cooling towers and air-cooled condensers.

STAFF ANALYSIS

This appendix uses the Spillane approach method to be consistent with staff assessments done for other projects and because the Spillane approach is described in the FAA materials as providing similar risk assessments for light aircraft. As stated above, staff will consider using the new MITRE method to the extent that it is applicable after conducting further review of the FAA methodology and once FAA develops guidance on how to evaluate the output of the Exhaust Plume Analyzer.

EQUIPMENT DESIGN AND OPERATING PARAMETERS

SIEMENS SGT6-5000F COMBUSTION GAS TURBINE DESIGN AND OPERATING PARAMETERS

The design and operating parameter data for the two 214 MW Siemens SGT6-5000F combustion gas turbine stacks are provided in **Plume Velocity Table 1**. Operating scenarios from four temperatures across the range of operation were selected for evaluation from the manufacturer performance estimate data sheet provided by the project owner in the Petition to Amend (PTA) Appendix 4.1A. Operating parameters chosen to compute worst-case vertical plume velocities include ambient temperatures of 23, 64, 98 and 108 degree Fahrenheit (ºF) at maximum turbine loads without duct burning[7]. The exhaust operating parameters provided in **Plume Velocity Table 1** correspond to full load operation for the corresponding ambient conditions.

[7] Turbine data provided by the vendor indicate a lower stack potential temperature and volumetric flow for cases including duct burning therefore yielding lower potential plume velocities at specified heights.

Plume Velocity Table 1
Siemens CTG Exhaust Parameters

Parameter	Siemens SGT6-5000F			
Stack Height	160 ft. (48.77 meters)			
Stack Diameter	22 ft. (6.71 meters)			
Number of Stacks (#)	2			
CTG Load (%)	100			
Case Number (#)	1	11	16	21
Ambient Temperature (°F)	23	64	98	108
Evaporative Cooling	No	Yes	Yes	Yes
Exhaust Temperature (°F)	195	215	221	223
Exhaust Flow Rate (ACFM)	1,337,241	1,334,691	1,346,870	1,344,061
Exhaust Velocity (ft/sec)/(m/s)	58.6/17.87	58.5/17.84	59.1/18.00	58.9/17.96
Stack Buoyance Flux (m^4/s^3)	518	394	327	309

Source: PHPP 2015g, Staff analysis

AIR-COOLED CONDENSER DESIGN AND OPERATING PARAMETERS

Plume Velocity Table 2 includes/approximates the design and operating parameter data for the ACC for the combined-cycle power block. The ACC stack parameter data submitted by the project owner (PHPP 2016dd) was provided by Siemens and the ACC manufacturer.

Plume Velocity Table 2
ACC Operating and Exhaust Parameters

Parameter	Air Cooled Condenser		
Number of Cells (total)	32		
Cell Height (ft)	130 ft. (39.62 meters)		
Cell Diameter (ft)	36.09 ft. (11 meters)		
Case Number (#)	1	2	3
Ambient Temperature (°F)	23	64	98
Number of Cells in Operation	10	16	32
Outlet Air Temperature (°F)	146.1	145.2	140.1
Exhaust Flow Rate (ACFM)	195,175	321,609	664,699
Exhaust Velocity (ft/sec)/(m/s)	3.2/0.97	5.2/1.60	10.8/3.30

Source: PEP 201X, Staff analysis

PLUME VELOCITY CALCULATION RESULTS

Using the Spillane approach, the plume average vertical velocities at different heights above ground were determined by staff for calm conditions for the proposed CTGs/HRSGs and ACC. As explained in the **Transportation and Traffic** section, a plume average vertical velocity of 4.3 m/s has been determined by staff to be the critical velocity of concern to light aircraft. This is based on the Australian Civil Aviation Safety

Authority (CASA) advisory circular (CASA 2003). Vertical velocities below this level are not of concern to light aircraft.

When two plumes merge, the vertical velocity is expected to decrease slower than plumes that have not merged. Therefore the height at which the vertical velocity decreases below the critical plume velocity of 4.3 m/s could occur at a higher height for merged plumes than plumes that are not merged. Plumes begin to merge when the sum of the radius of one plume and an adjacent plume equals the distance between the two stacks. Plumes are considered fully merged at the height the when the sum of the plume radii is equal to twice the distance between the stacks. Staff evaluated the potential for plume merging using a stack-to-stack distance for the CTGs/HRSGs of approximately 130 feet or 40 meters

Staff calculated plume average vertical velocities for the four operating cases outlined in **Plume Velocity Table 1** for the CTGs and HRSGs. The worst-case predicted plume velocities occur at 100 percent load without duct firing or evaporative cooling at the 23°F ambient temperature scenario. Staff's calculated worst-case plume average velocity values are provided in **Plume Velocity Table 3**. Height above ground is determined by adding the physical stack height to z, the height above stack exit.

The Siemens SGT6-5000F gas turbine plume average velocity is calculated to drop below 4.3 m/s at a height of approximately 820 feet above ground for the single turbine plume (N=1). The plume diameter at this height would be around 62 meters, which would be larger than the distance between the two Siemens SGT6-5000F gas turbine stacks (approximately 40 meters). Therefore the merging of the adjacent turbine plumes should be considered. In the case of two plumes fully merging (N=2), the average velocity is calculated to drop below 4.3 m/s at the height of 1,245 feet above ground.

Plume Velocity Table 3
Siemens Turbine Plume Size (m) and Vertical Plume Velocities (m/s)

Height Above Ground Level (Feet)	Plume Diameter (m) [a]	Number of Merged Stacks	Plume Velocity (m/s)
300	11.76	1.00	8.82
400	21.51	1.00	6.47
500	31.27	1.00	5.54
600	41.02	1.20	5.24
700	50.77	1.45	5.08
800	60.53	1.70	4.96
900	70.28	1.94	4.87
1,000	80.04	2.00	4.69
1,100	89.79	2.00	4.51
1,200	99.54	2.00	4.36
1,300	109.30	2.00	4.22
1,400	119.05	2.00	4.10
1,500	128.80	2.00	3.99
1,600	138.56	2.00	3.90
1,700	148.31	2.00	3.81
1,800	158.07	2.00	3.73
1,900	167.82	2.00	3.65
2,000	177.57	2.00	3.59

Notes:
a – The separation between the two stacks would be about 130 ft (40 m) and the plumes will begin to merge when the plume diameter is the same as the separation and is assumed to be fully merged when the plume diameter is twice the stack separation.

Staff calculated plume average vertical velocities for all three operating cases shown in **Plume Velocity Table 2** for the combined-cycle's air-cooled condenser and determined that the worst-case height at which the plume velocities would drop below 4.3 m/s would occur at the 98°F ambient temperature condition. This result was based on the assumption all cells of the ACC were in operation at the 98°F ambient temperature condition and the plumes from all cells in operation would be fully merged. Staff's calculated worst-case plume average velocity values are provided in **Plume Velocity Table 4**. The combined-cycle air-cooled condenser plume average velocity is calculated to drop below 4.3 m/s at a height of approximately 1,222 feet above ground.

Plume Velocity Table 4
Combined-Cycle Air-Cooled Condenser Vertical Plume Velocities (m/s)

Height Above Ground Level (Feet)	Plume Velocity (m/s)
400	5.19
500	5.54
600	5.38
700	5.17
800	4.96
900	4.77
1,000	4.60
1,100	4.45
1,200	4.32
1,300	4.20
1,400	4.10
1,500	4.00
1,600	3.91
1,700	3.83
1,800	3.75
1,900	3.68
2,000	3.61

It should be noted that additional thermal plume merging between the gas turbine and the air-cooled condenser could occur and increase the plume heights where vertical velocities of 4.3 m/s are exceeded under worst case conditions. The model used for this analysis is not able to add different kinds of thermal plumes together. However, the approach is still conservative given the conservatism built in the model.

In addition, the ACC thermal plume analysis submitted by the project owner followed a different set of assumptions. For cases involving more than two stacks such as the ACC, plume merging can become more complex. The 32 individual cells of the ACC would be arranged in four rows of eight cells (4 x 8 matrix). The analysis provided by the project owner conservatively used an effective stack diameter calculated based on the number of cells in operation for each case. The calculated effective stack diameter represents a single merged cell that is then used with the Spillane methodology. The results provided by the project owner were replicated by staff. Per the project owner's analysis methodology the plume would not be expected to exceed a vertical velocity of 4.3 m/s under worst case conditions, however the single plume would retain the peak vertical velocity at higher altitudes. Both the staff analysis provided above and the project owner analysis result in the predicted vertical velocity from the ACC to be less than the combined cycle.

WIND SPEED STATISTICS

The **Air Quality** section of this document uses meteorological data from Palmdale Air Force Plant 42 Automated Surface Observing System (ASOS) located approximately 2.5 km east-southeast of the PEP site. The wind roses and wind frequency distribution data collected from the ASOS monitoring station are considered to be representative for the project site location. The project owner provides the calm wind speed statistics from the ASOS monitoring station from ground-level meteorological data collected for 2010 through 2014 (PHPP 2015g). Calm winds for the purposes of the reported monitoring station statistics are those hours with average wind speeds below 0.5 m/s. Calm or very low wind speeds can also occur for shorter periods of time within each of the monitored average hourly conditions. However, the shortest time resolution for the available meteorological data is one hour. The annual wind rose data shows calm/low wind speed conditions averaging an hour or longer is 3.82 percent in the site area, or about 335 hours per year.

CONCLUSIONS

The worst case calm wind condition vertical plume average velocities from the proposed Siemens SGT6-5000F combined-cycle turbine stacks are predicted to drop below 4.3 m/s at the height of 1,245 feet assuming two plumes fully merged. The worst case air-cooled condenser plume average velocity is calculated to drop below 4.3 m/s at a height of approximately 1,222 feet. Thus, the thermal plume from the proposed combined-cycle turbines would cause greatest risk to light aircraft.

Also, there is the potential for additional thermal plume merging between the gas turbine stacks and the ACC. This merging could potentially increase the plume heights where vertical velocities of 4.3 m/s are exceeded under worst case conditions. Calm/low wind speed conditions (wind speeds less than 0.5 m/s) conducive to the formation of worst-case thermal plume velocities would occur on average approximately 3.82 percent of the time.

VISUAL RESOURCES CONDITIONS OF CERTIFICATION

VIS-1 Deleted

SURFACE TREATMENT OF PROJECT STRUCTURES AND BUILDINGS

VIS-2 The project owner shall also color and finish the surfaces of all non-mirror project structures and buildings visible to the public to ensure that they: (1) minimize visual intrusion and contrast by blending with the landscape; (2) minimize glare; and (3) comply with local design policies and ordinances including special design standards for project development within a scenic highway viewshed pursuant to the city of Palmdale General Plan's Environmental Resources Policy. The transmission line conductors shall be non-specular and non-reflective, and the insulators shall be non-reflective and non-refractive.

The project owner shall submit a Surface Treatment Plan to the Compliance Project Manager (CPM) for review and approval. 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; 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 The construction of the transmission line and towers near Pearlblossom Highway shall implement special design standards (i.e. height limits) pursuant to the city of Palmdale General Plan's Environmental Resources;

E. One set of 11" x 17" color photo simulations at life size scale of the proposed treatment for project structures, including structures treated during manufacture, from the Key Observation Points;

F. A specific schedule for completing the treatment; and

G. A procedure to ensure proper treatment maintenance for the life of the project.

The project owner shall not request vendor treatment of any buildings or structures during their manufacture, or perform final field treatment on any buildings or structures, until the project owner has received Surface Treatment Plan approval by the CPM.

Verification: At least 90 days prior to specifying vendor color(s) and finish(es) for structures or buildings to be surface treated during manufacture, the project owner shall submit the proposed Surface Treatment Plan to the CPM for review and approval and simultaneously to the City of Palmdale Planning Department for review and comment. The project owner shall provide the CPM with the City's comments at least 30 days prior to the estimated date of providing paint specification to vendors.

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 Surface Treatment Plan must be submitted to the CPM for review and approval.

Within 90 days after 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 is ready for inspection; and shall submit one set of electronic color photographs from the Key Observation Points. 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.

CONSTRUCTION LIGHTING

VIS-3 The project owner shall ensure that lighting for construction of the power plant is used in a manner that minimizes potential night lighting impacts, as follows:

A. All lighting shall be of minimum necessary brightness consistent with worker safety and security;

B. All fixed position lighting shall be shielded/hooded, and directed downward and toward the area to be illuminated to prevent direct illumination of the night sky and obtrusive spill light beyond the boundaries of the power plant site or the site of construction of ancillary facilities, including any security related boundaries;

C. Wherever feasible and safe and not needed for security, lighting shall be kept off when not in use; and

D. Complaints concerning adverse lighting impacts will be promptly addressed and mitigated.

Verification: Within seven days after the first use of construction lighting, the project owner shall notify the CPM that the lighting is ready for inspection. If the CPM requires modifications to the lighting, the project owner shall implement the necessary modifications within 15 days of the CPM's request and notify the CPM that the modifications have been completed.

Within 10 days of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the Compliance General Conditions including a proposal to resolve the complaint, and a schedule for implementation. The project owner shall notify the CPM within 10 days after completing

implementation of the proposal. A copy of the complaint resolution form report shall be included in the subsequent Monthly Compliance Report following complaint resolution.

PERMANENT EXTERIOR LIGHTING

VIS-4 To the extent feasible, consistent with safety and security considerations and commercial availability, the project owner shall design and install all permanent exterior lighting such that a) light fixtures do not cause obtrusive spill light beyond the project site; b) lighting does not cause excessive reflected glare; c) direct lighting does not illuminate the nighttime sky; d) illumination of the project and its immediate vicinity is minimized, and e) lighting complies with local policies and ordinances.

The project owner shall submit to the CPM for review and approval and simultaneously to the City of Palmdale Department of Public Works and Planning, Development Services Division for review and comment a Lighting Mitigation Plan that includes the following:

A. A process for addressing and mitigating complaints received about potential lighting impacts;

B. Lighting shall incorporate commercially available fixture hoods/shielding, with light directed downward or toward the area to be illuminated;

C. Light fixtures shall not cause obtrusive spill light beyond the project boundary;

D. All lighting shall be of minimum necessary brightness consistent with operational safety and security; and

E. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall have (in addition to hoods) switches, timer switches, or motion detectors so that the lights operate only when the area is occupied.

Verification: At least 90 days prior to ordering any permanent exterior lighting, the project owner shall contact the CPM to determine the required documentation for the Lighting Mitigation Plan.

At least 60 days prior to ordering any permanent exterior lighting, the project owner shall submit to the CPM for review and approval and simultaneously to the City of Palmdale Department of Public Works and Planning, Development Services Division for review and comment a Lighting Mitigation Plan. The project owner shall provide the City's comments to the CPM at least 10 days prior to the date lighting materials are ordered.

If the CPM determines that the plan requires revision, the project owner shall provide to the CPM a revised plan for review and approval by the CPM.

The project owner shall not order any exterior lighting until receiving CPM approval of the Lighting Mitigation Plan.

Prior to commercial operation, the project owner shall notify the CPM that the lighting has been installed and is ready for inspection. If after inspection the CPM notifies the project owner that modifications to the lighting are needed, within 30 days of receiving that notification the project owner shall implement the modifications and notify the CPM that the modifications have been completed and are ready for inspection.

Within 10 days of receiving a lighting complaint, the project owner shall provide the CPM with a complaint resolution form report as specified in the Compliance General Conditions including a proposal to resolve the complaint, and a schedule for implementation. A copy of the complaint resolution form report shall be submitted to the CPM within 30 days of complaint resolution.

LANDSCAPING

VIS-5 The project owner shall provide landscaping within the 30 foot setback area between the fence line and East Avenue M/Site 1 Road. The landscaping should be consistent with the conceptual Joshua Tree and Native Desert Vegetation Preservation Chapter 14.04 of the Palmdale Municipal Code (shown on **VISUAL RESOURCES Figure 3B**). The landscaping shall also comply with the city of Palmdale municipal code requirements stipulated in section 18-60.140 (Landscape Development). The project owner shall maintain the landscaping for the life of the project, including providing any needed irrigation, removing debris on an annual or semi-annual basis, and replacing dead or dying vegetation.

The project owner shall submit simultaneously to the City of Palmdale Planning Department for review and comment and to the CPM for review and approval, a landscaping plan whose proper implementation will satisfy these requirements.

The project owner shall not implement the plan until the project owner receives approval of the plan from the CPM. The planting must be completed by the start of commercial operation, and the planting must occur during the optimal planting season.

Verification: Prior to commercial operation and at least 90 days prior to installing the landscaping, the project owner shall submit the Landscaping Plan to the CPM for review and approval and simultaneously to City of Palmdale Planning Division for review and comment. The project owner shall provide the City's comments (if any) 30 days prior to the installation of the landscaping.

If the CPM determines that the plan requires revision, the project owner shall provide to the CPM and city of Palmdale Planning Division a plan with the specified revision(s) for review and approval by the CPM before the plan is implemented.

The project owner shall simultaneously notify the CPM and city of Palmdale Planning Division within seven days after completing installation of the landscaping and is ready for inspection.

The project owner shall report landscape maintenance activities, including replacement of dead or dying vegetation, for the previous year of operation in each Annual Compliance Report.

WASTE MANAGEMENT CONDITIONS OF CERTIFICATION

The existing and modified conditions of certification are adequate to ensure there would be no unmitigated significant impacts.

WASTE-1 The project owner shall implement the following steps at locations where excavation or significant ground disturbance will occur for the construction of the project transmission line. All steps shall be completed at least 60 days prior to the project transmission line construction to prevent mobilization of contaminants and exposure of workers and the public:

- Step 1. Investigate the tower locations and associated laydown and staging areas for construction of the transmission line to determine whether these locations have a record of hazardous material contamination which would affect construction activities. This investigation shall be performed as a Phase I Environmental Site Assessment (ESA). If contamination is identified that could potentially affect the health and safety of workers or the public during construction of the Proposed Project, proceed to Step 2.

- Step 2. Perform a Phase II ESA to characterize the locations and determine the nature and extent of the contamination present at the location before construction activities proceed within the Project Right- of-Way near the suspect site. If it is determined there are conditions that may pose a risk to the health and safety of workers or the public, or could mobilize contamination, then proceed to Step 3.

- Step 3. Prepare a Health Risk Assessment to determine whether risks may be present and a Remedial Action Plan to identify what remedial measures would be required to facilitate linear construction if there were conditions that pose a risk. Mitigate the health and safety risk according to applicable regulations or requirements. This would include preparation and implementation of site-specific Health and Safety Plans, Work Plans, and/or Remediation Plans.

Verification: The project owner shall submit the Phase I ESA, and Phase II ESA, Health Risk Assessment results and other plans, as applicable, to the CPM at least 60 days prior to commencement of transmission lines construction.

WASTE-2 In areas where the land has been or is currently being farmed, and where excavation or significant ground disturbance will occur for the construction of the project transmission line, soil samples shall be collected and tested for herbicides, pesticides, and fumigants to determine the presence and extent of any material levels of contamination.

The sampling and testing plan shall be prepared in consultation with the appropriate Los Angeles County agency, conducted by an appropriate California licensed professional, and sent to a California Certified laboratory for testing. Sampling and analysis shall be consistent with the DTSC's 'Interim Guidance for Sampling Agricultural Fields for School Sites (Third Revision)' or

equivalent. A report documenting the areas proposed for sampling, and the process used for sampling and testing shall be submitted to the Energy Commission for review and approval at least 90 days before transmission line construction occurs in the affected areas.

Results of the laboratory testing and recommended resolutions for handling and excavation of material found to exceed regulatory requirements shall be submitted to the Energy Commission 60 days prior to transmission line construction occurs in the affected areas. Should sampling indicate additional remediation or mitigation is required, Conditions of Certification **WASTE-3** and **-4** would apply.

Excavated materials containing elevated levels of pesticide or herbicide require special handling and disposal according to procedures established by the regulatory agencies. Effective dust suppression procedures shall be used in construction areas to reduce airborne emissions of these contaminants and reduce the risk of exposure to workers and the public. Regulatory agencies for the State of California and Los Angeles County shall be contacted by Applicant or its contractor to plan handling, treatment, and/or disposal options.

Verification: The project owner shall identify the current/previous land use for the project transmission tower locations and associated laydown and staging areas for construction of the transmission line. The project owner shall submit a report documenting the areas proposed for sampling, and the process used for sampling and testing to the CPM for approval at least 90 days before transmission line construction occurs in the affected areas. Results of the laboratory testing and recommended mitigation or remediation plan for handling and excavation of material found to exceed regulatory requirements shall be submitted to the CPM for review and approval 60 days prior to transmission line construction.

WASTE-3 The project owner shall contract with an experienced and qualified Professional Engineer or Professional Geologist, who shall be available for consultation and oversight of earth moving activities throughout all phases of site construction. The Professional Engineer/Geologist shall be given full authority by the project owner to oversee any earth moving activities that have the potential to disturb contaminated soil. Selection of the Professional Engineer/Geologist shall be subject to CPM approval.

Verification: At least 30 days prior to the start of site mobilization, the project owner shall submit the resume of their preferred Professional Engineer or Geologist to the CPM for review and approval. The project owner shall then provide a copy of the contract with the approved Professional Engineer/Geologist prior to the start of site construction activities.

WASTE-4 If potentially contaminated soil is identified during any phase of site construction, including 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 DTSC, 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. The Professional Engineer or Professional Geologist shall contact the project owner, the CPM, and representatives of the DTSC for guidance and oversight in accordance with Condition of Certification **WASTE-3**.

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-5 In the event that contamination is identified during assessment of the project site, during any phase of construction, and if the Project Engineer (PE), Professional Geologist (PG), or CPM reasonably determines that sampling is needed to confirm the nature and extent of contamination, then the Project PE and/or PG shall file a written report to the CPM stating a recommended course of action. If significant contamination (i.e., contamination levels which exceed the EPA Reportable Quantity [RQ] thresholds as listed under the Emergency Planning and Community Right to Know Act [EPCRA]) are identified and which the PG, PE, or CPM reasonably determines may pose a significant risk to workers, the public, or the environment, then the DTSC will be consulted regarding the proposed course of action.

Verification: The project owner shall consult with DTSC, and enter into an agreement at DTSC's request, to ensure oversight of any additional site assessment and remediation work needed to reevaluate the site or address contamination levels above Reportable Quantities, that have been determined to pose a significant risk to workers or the public found during any phase of site construction. The project owner shall ensure that the CPM is involved and appraised of all discussions with DTSC, and CPM review and approval shall be required for project decisions addressing site remediation.

WASTE-6 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 City of Palmdale Building and Safety Department and CPM for review 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 City of Palmdale Building and Safety Department and CPM for review no less than 30 days prior to the initiation of construction activities at the site.

WASTE-7 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 and provide a description and timeline for correction of the violation. The CPM shall notify the project owner of any changes that will be required in the way project-related wastes are managed to ensure compliance with LORS.

WASTE-8 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 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 notification and receipt of the number to the CPM in the next scheduled Monthly Compliance Report after receipt of the number. Submittal of the notification and issued number documentation to the CPM is only needed once unless there is a change in ownership, operation, waste generation, or waste characteristics that requires a new notification to USEPA. Documentation of any new or revised hazardous waste generation notifications or changes in identification number shall be provided

WASTE-9 Deleted

WASTE-10 The project owner shall prepare an Operation Waste Management Plan for all wastes generated during operation of the facility 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 Palmdale area CUPA – Los Angeles County Fire Department– and DTSC 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-11 Deleted

WASTE-12 Deleted

WASTE-13 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.

The project owner shall document all unauthorized releases and spills of hazardous substances, materials, or wastes that are in excess of reportable quantities (RQs) that occur on the project property or transmission corridors during construction and on the project property during operation. The documentation shall include, at a minimum, the following information:

- location of release;
- date and time of release;
- reason for release;
- volume released;
- amount of contaminated soil/material generated;
- how release was managed and material cleaned up;
- 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.

Verification: Copies of the unauthorized releases and spill documentation shall be provided to the CPM within 30 days of the date the release was discovered.

WASTE- 14 During the construction phase, project owner shall require contracted waste and/or refuse haulers to document each waste load transferred from the construction site to a disposal site and/or recycling center. The project owner shall be responsible for cleanup debris from local illegal dumping, waste burning, or other activities located within the road paving project footprint. If potentially contaminated soil is identified during any phase of road paving, as evidenced by discoloration, odor, detection by handheld instruments, or other signs, the project owner shall have a registered environmental professional 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, and the CPM stating the recommended course of action.

Verification: The project owner shall identify permitted solid waste facilities or recycling centers that receive roadway waste and maintain copies of weigh tickets and manifests showing the type and volume of waste disposed. This information shall be maintained at the job site and made accessible to the CPM upon request. The project owner shall submit any reports of contamination filed by the Professional Engineer or Professional Geologist to the CPM within 5 days of their receipt.

WORKER SAFETY & FIRE PROTECTION CONDITIONS OF CERTIFICATION

WORKER SAFETY-1 The project owner shall submit to the 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 which shall also include a Heat Stress Protection Plan and a Best Management Practices (BMPs) for the storage and application of herbicides used to control weeds;
- A Construction Emergency Action Plan; and
- A Construction Fire Prevention Plan.

The Personal Protective Equipment Program, the Exposure Monitoring Program, 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. The Construction Emergency Action Plan and the Fire Prevention Plan shall be submitted to the Los Angeles County Fire Department for review and comment prior to submittal to the CPM for approval.

Verification: At least 30 days prior to the start of construction, the project owner shall submit to the CPM for review and approval a copy of the Project Construction Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the Los Angeles 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 which shall also include a Heat Stress Protection Plan and a Best Management Practices (BMPs) for the storage and application of herbicides used to control weeds ;
- 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, and Personal Protective Equipment Program shall be submitted to the CPM for review and approval concerning compliance of the program with all applicable Safety Orders. The Operation Fire Prevention Plan and the Emergency Action Plan shall also be submitted to the Los Angeles County Fire Department for review and comment.

Verification: At least 30 days prior to the start of first-fire or commissioning, the project owner shall submit to the CPM for approval a copy of the Project Operations and Maintenance Safety and Health Program. The project owner shall provide a copy of a letter to the CPM from the Los Angeles 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 over-all 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 30 days prior to the start of site mobilization, the project owner shall submit to the CPM the name and contact information for the Construction Safety Supervisor (CSS). The contact information of any replacement (CSS) shall be submitted to the CPM within one business day. The CSS shall submit in the Monthly Compliance Report a monthly safety inspection report to include:

- Record of all employees trained for that month (all records shall be kept on site for the duration of the project);
- Summary report of safety management actions and safety-related incidents that occurred during the month;
- Report of any continuing or unresolved situations and incidents that may pose danger to life or health; and
- Report of accidents and injuries that occurred during the month.

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 30 days prior to the start of construction, the project owner shall provide proof of its agreement to fund the Safety Monitor services to the CPM for review and approval.

WORKER SAFETY-5 The project owner shall ensure that a portable automatic external defibrillator (AED) is located on site during construction and operations and shall implement a program to ensure that workers are properly trained in its use and that the equipment is properly maintained and functioning at all times. During construction and commissioning, the following persons shall be trained in its use and shall be on-site whenever the workers that they supervise are on-site: the Construction Project Manager or delegate, the Construction Safety Supervisor or delegate, and all shift foremen.

During operations, all power plant employees shall be trained in its use. The training program shall be submitted to the CPM for review and approval.

Verification: At least 30 days prior to the start of site mobilization the project owner shall submit to 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 project owner shall identify and provide a second access point for emergency personnel to enter the site. This access point and the method of gate operation shall be submitted to the Los Angeles County Fire Department for review and comment and to the CPM for review and approval.

Verification: At least 60 days prior to the start of site mobilization, the project owner shall submit to the Los Angeles County Fire Department and the CPM preliminary plans showing the location of a second access point to the site and a description of how the gate will be opened by the fire department. At least (30) days prior to the start of site mobilization, the project owner shall submit final plans to the CPM review and approval. The final plan submittal shall also include a letter containing comments from the Los Angeles County Fire Department or a statement that no comments were received.

WORKER SAFETY-7 The project owner shall provide to the CPM for review a copy of the worker safety plan for reconductoring the transmission lines between the Pearl Blossom and Vincent substations.

Verification: At least 60 days prior to the start of reconductoring, the project owner shall submit to the CPM the worker safety plan for review.

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 consistent with 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 micrograms per cubic meter ($\mu g/m^3$).

Verification: At least 30 days prior to the commencement of site mobilization, the enhanced Dust control Plan shall be provided to the CPM for review and approval.

WORKER SAFETY-9 Deleted

WORKER SAFETY-10 The project owner shall report to the CPM within 24 hours of any incidence of heat illness (heat stress, exhaustion, stroke, or prostration) occurring in any worker on-site and shall report to the CPM the incidence of any confirmed case of Valley Fever in any worker on the site within 24 hours of receipt of medical diagnosis.

Verification: The project owner shall provide reports of heat-related and Valley Fever incidences in any worker on the site via telephone call or e-mail to the CPM within 24 hours of a heat-related occurrence or confirmed diagnosis of a case of Valley Fever, and shall include such reports in the Monthly Compliance Report during construction and the Annual Compliance Report during operation.

WORKER SAFETY-11 The project owner shall adhere to all applicable provisions of the latest version of NFPA 850: Recommended Practice For Fire Protection for Electric Generating Plants and High Voltage Direct Current Converter Stations as the minimum level of fire protection. The project owner shall interpret and adhere to all applicable NFPA 850 recommended provisions and actions stating “should” as “shall”. In any situations where both NFPA 850 and the Los Angeles County Fire Code have application, the more restrictive shall apply.

Verification: The project owner shall ensure that the project adheres to all applicable provisions of NFPA 850. At least 60 days prior to the start of construction of the fire protection system, the project owner shall provide all fire protection system specifications and drawings to the Los Angeles County Fire Department for review and comment, to the CPM for review and approval, and to the CBO for plan check and construction inspection.

FACILITY OF DESIGN CONDITIONS OF CERTIFICATION

Following are the existing conditions of certification applicable to the PEP with the following revisions. These revisions include the following:

- The applicable version and section references of the CBSC have been updated to 2013;
- Condition of Certification **GEN-2** has been updated to reflect the equipment proposed for the amended project, as specified in **GEN-2**, **Facility Design Table 2**: **Major Structures and Equipment List**; and
- Condition of Certification **ELEC-1** refers to 13.8-kV systems. The PEP would use Siemens equipment instead of the General Electric equipment selected for PHPP and therefore references to 13.8-kV voltages should be replaced with 18 kV; **ELEC-1** has been revised accordingly.

GEN-1 The project owner shall design, construct, and inspect the project in accordance with the 2013 California Building Standards Code (CBSC), also known as Title 24, California Code of Regulations, which encompasses the California Building Code (CBC), California 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 laws, ordinances, regulations and standards (LORS) in effect at the time initial design plans are submitted to the chief building official (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 2013 CBC, Appendix Chapter 1, § 1.1.3 Scope). All transmission facilities (lines, switchyards, switching stations, and substations) are covered in the conditions of certification in the **Transmission System Engineering** section of this Decision.

In the event that the initial engineering designs are submitted to the CBO when the successor to the 2013 CBSC is in effect, the 2013 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 compliance project manager (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 (2013 CBC, Appendix Chapter 1, § 111, Certificate of Occupancy). 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, 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 days (or within 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.

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, in accordance with the 2013 CBC, Section 109. These fees may be based on the value of the facilities reviewed, on hourly rates, or may be otherwise agreed upon by the project owner and the CBO.

Verification: A copy of the contract between the project owner and the CBO shall be submitted to the CPM. 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, structural engineer, or civil engineer, as the resident engineer in charge of the project (2013 California Administrative Code, § 4-209, Designation of Responsibilities). All transmission facilities (lines, switchyards, switching stations, and substations) are addressed in the conditions of certification in the **Transmission System Engineering** section of this Decision.

The resident engineer 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 resident engineer 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 shall have the authority to halt construction and to require changes or remedial work if the work does not meet requirements.

If the resident engineer 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 within a 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 resident engineer and any other delegated engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the resident engineer and other delegated engineer(s) within five days of the approval.

If the resident engineer or the delegated engineer(s) is subsequently reassigned or replaced, the project owner has five days to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

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 Decision.

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 (2013 CBC, Appendix Chapter 1, § 104, Duties and Powers of Building Official).

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; and 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 resident engineer 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 (2013 CBC, Chapter 18, § 1803 and Chapter 18A, § 1803A Geotechnical Investigations);

3. Be present, as required, during site grading and earthwork to provide consultation and monitor compliance with requirements set forth in the 2013 CBC, Chapter 17, § 1704, Special Inspection (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 resident engineer.

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 (2013 CBC, Appendix Chapter 1, § 115, Stop Work Orders).

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 2013 California Administrative Code, section 4-211, Observation and Inspection of Construction (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 resident engineer 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 within a 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 within a project owner- and CBO-approved alternative time frame) prior to the start of construction, the project owner shall submit to the CBO for review and approval, resumes and registration numbers of the responsible design engineer, mechanical engineer, and electrical engineer assigned to the project.

The project owner shall notify the CPM of the CBO's approvals of the responsible engineers within five days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the resume and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

GEN-6 Prior to the start of an activity requiring special inspection, 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 2013 CBC, Chapter 17, Section 1704, Special Inspections; Chapter 17A, Section 1704A, Special Inspections; and Appendix Chapter 1, Section 110, Inspections. All transmission facilities (lines, switchyards, switching stations, and substations) are handled in conditions of certification in the **Transmission System Engineering** section of this Decision.

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. Observe the work assigned for conformance with the approved design drawings and specifications;

3. Furnish inspection reports to the CBO and resident engineer. All discrepancies shall be brought to the immediate attention of the resident engineer for correction, then, if uncorrected, to the CBO and the CPM for corrective action (2013 CBC, Chapter 17, § 1704.2.4, Report Requirements); and

4. Submit a final signed report to the resident engineer, 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 within a project owner- and CBO-approved alternative time frame) prior to the start of an activity requiring special inspection, the project owner shall submit to the CBO for review and approval, with a copy to the CPM, the name(s) and qualifications of the certified weld inspector(s) or other certified special inspector(s) assigned to the project to perform one or more of the duties set forth above. The project owner shall also submit to the CPM a copy of the CBO's approval of the qualifications of all special inspectors in the next monthly compliance report.

If the special inspector is subsequently reassigned or replaced, the project owner has five days in which to submit the name and qualifications of the newly assigned special inspector to the CBO for approval. The project owner shall notify the CPM of the CBO's approval of the newly assigned inspector within five days of the approval.

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 (2013 CBC, Chapter 17, § 1704.2.4, Report Requirements). 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 five 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 an alternative site approved by the CPM during the operating life of the project (2013 CBC, 1.8.4.3.1, Retention of Plans). 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" files (Adobe .pdf 6.0), 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 investigation reports required by the 2013 CBC, Chapter 18, § 1803.6 Reporting, and § 1803, Geotechnical Investigation.

Verification: At least 15 days (or within a 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 (2013 CBC, Appendix Chapter 1, § 115, Stop Work Orders).

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 2013 CBC, Appendix Chapter 1, section 110, Inspections, and Chapter 17, section 1704, Special Inspections. 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 (2013 CBC, Chapter 17, § 1704.2.4, Report Requirements). 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 five days of the discovery of any discrepancies, the resident engineer shall transmit to the CBO and the CPM a non-conformance report (NCR), and the proposed corrective action for review and approval. Within five days of resolution of the NCR, the project owner shall submit the details of the corrective action to the CBO and the CPM. A list of NCRs, for the reporting month, shall also be included in the following monthly compliance report.

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 (2013 CBC, Chapter 17, § 1703.2, Written Approval).

Verification: Within 30 days (or within a 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 **Facility Design 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 (2013 CBC, Appendix Chapter 1, § 104.1, Duties and Powers of Building Official, 105, Permits);

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 (2013 CBC, Appendix Chapter 1, § 107.5 Retention of Construction Documents

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 (2013 CBC, Appendix Chapter 1, § 107.3.4, Design Professional in Responsible Charge); and

5. Submit to the CBO the responsible design engineer's signed statement that the final design plans conform to applicable LORS (2013 CBC, Appendix Chapter 1, § 107.3.4, Design Professional in Responsible Charge).

Verification: At least 60 days (or within a 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 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 2013 CBC, Chapter 17, section 1704, Special Inspections and Structural Observations.

Verification: If a discrepancy is discovered in any of the above data, the project owner shall, within five days, prepare and submit an NCR describing the nature of the discrepancies and the proposed corrective action to the CBO, with a copy of the transmittal letter to the CPM (2013 CBC, Chapter 17, § 1704.2.4, Report Requirements). The NCR shall reference the condition(s) of certification and the applicable CBC chapter and section. Within five days of resolution of the NCR, the project owner shall submit a copy of the corrective action to the CBO and the CPM. The project owner shall transmit a copy of the CBO's approval or disapproval of the corrective action to the CPM within 15 days. If disapproved, the project owner shall advise the CPM, within five days, the reason for disapproval, and the revised corrective action necessary to obtain the CBO's approval.

STRUC-3 The project owner shall submit to the CBO design changes to the final plans required by the 2013 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 (2013 CBC, Appendix Chapter 1, § 107, Submittal Documents; 2013 California Administrative Code, § 4-215, Changes in Approved Drawings and Specifications).

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 2013 CBC, shall, at a minimum, be designed to comply with H-2 Occupancy Category of the 2013 CBC.

Verification: At least 30 days (or within a 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. 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 (2013 CBC, Appendix Chapter 1, § 107, Submittal Documents; § 110, Inspections; § 105, Permits; 2013 California Plumbing Code, § 301, Materials).

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 (2013 CBC, Appendix Chapter 1, § 107.3.4, Design Professional in Responsible Charge), which may include, but are not limited to:

- American National Standards Institute (ANSI) B31.1 (Power Piping Code);
- ANSI/NFPA Z223.1 (Fuel Gas Piping Code);
- ANSI B31.3 (Chemical Plant and Petroleum Refinery Piping Code);
- ANSI B31.8 (Gas Transmission and Distribution Piping Code);
- NACE R.P. 0169-83;
- NACE R.P. 0187-87;
- 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);
- Los Angeles County codes; and
- City of Palmdale codes.

The CBO may deputize inspectors to carry out the functions of the code enforcement agency (2013, Appendix Chapter 1, § 103.3, Deputies).

Verification: At least 30 days (or within a 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 (2013 CBC, Appendix Chapter 1, § 110, Inspections).

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 within a 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 (2013 CBC, Appendix Chapter 1, § 110.3.7, Energy Efficiency Inspections; § 107.3.4, Design Professionals in Responsible Charge).

Verification: At least 30 days (or within a 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 110 Volts or higher (see a representative list, below) 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 Decision.

A. Final plant design plans shall include:

1. one-line diagram for the 18-kV, 4.16-kV and 480-V systems;

2. system grounding drawings;

3. lightning protection system; and

4. Hazard area classification plan.

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 18-kV, 4.16-kV and 480-V systems;

6. system grounding requirements;

7. lighting energy calculations; and

8. 110 volt system design calculations and submittals showing feeder sizing, transformer and panel load confirmation, fixture schedules and layout plans.

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.

GEOLOGY & PALEONTOLOGY CONDITIONS OF CERTIFICATION

Staff has proposed modifications to Condition of Certification **GEO-1** to require compliance with current design standards. Changes to **PAL-1** and **PAL-8** are also proposed to ensure consistency with current LORS and professional guidelines.

GEO-1 A Soils Engineering Report as required by Section 1803 of the California Building Code (CBC) (2013), or its successor in effect at the time construction of the project were to commence, shall specifically include laboratory test data, associated geotechnical engineering analyses, and a thorough discussion of seismicity; liquefaction; dynamic compaction; compressible soils; corrosive soils; and tsunami. In accordance with CBC, the report must also include recommendations for ground improvement and/or foundation systems necessary to mitigate these potential geologic hazards, if present.

Verification: The project owner shall include in the application for a grading permit a copy of the Soils Engineering Report which addresses the potential for strong seismic shaking; liquefaction; dynamic compaction; settlement due to compressible soils; and corrosive soils; and a summary of how the results of the analyses were incorporated into the project foundation and grading plan design for review and comment by the delegate chief building official (CBO). A copy of the Soils Engineering Report, application for grading permit and any comments by the CBO are to be provided to the CPM at least 30 days prior to grading.

GEO-2 Additional fault investigation shall be performed for the southern end of the natural gas pipeline in conjunction with city of Palmdale approval, in accordance with city of Palmdale General Plan S1.1.7. which requires that utility locations be limited in areas with exposure to faulting, and based on the city of Palmdale General Plan faulting hazards map (Figure LU-4). If the natural gas pipeline crosses the San Andreas fault or any of its splays (Cemetery fault), or if it would be in danger of rupture from intense ground shaking, design shall include appropriate safety features. This shall include a mechanism, such as automatic pressure-sensitive shut-off valves, to cut gas supply in event of pipe rupture.

Verification: A fault investigation report for the southern end of the proposed natural gas line shall be submitted to the CPM at least 60 days prior to start of pipeline construction. Recommendations for further mitigation, beyond automatic shut-off valves, shall be included, as appropriate.

GEO-2A Additional fault investigation shall be performed for the southern end of the natural gas pipeline and transmission line Alternative Route 4 (if selected), in conjunction with city of Palmdale approval, in accordance with city of Palmdale General Plan S1.1.7, which requires that utility locations be limited in areas with exposure to faulting, and based on the city of Palmdale General Plan faulting hazards map (Figure LU-4). If the natural gas pipeline or underground transmission line cross the San Andreas fault or any of its splays (Cemetery fault), or if it would be in danger of rupture from intense ground shaking, design shall include appropriate safety features. This shall

include a mechanism, such as automatic pressure-sensitive shut-off valves, to cut gas supply in event of pipe rupture.

Verification: A fault investigation report for the southern end of the proposed natural gas line and transmission line Alternative Route 4 (if selected) shall be submitted to the CPM at least 60 days prior to start of trenching. Recommendations for further mitigation, beyond automatic shut-off valves, shall be included, as appropriate.

GEO-3 Additional fault investigation shall be performed for the southern end of electric transmission line where it crosses the Llano fault Alquist-Priolo Zone and the San Andreas Fault Alquist-Priolo zone. This investigation shall include sufficient geologic mapping and/or fault trenching to verify that towers would not be directly impacted by fault rupture.

Verification: A fault investigation report for the southern end of the proposed transmission line shall be submitted to the CPM at least 60 days prior to start of transmission line construction. Recommendations for further mitigation, beyond avoiding founding transmission towers directly on fault traces, shall be included, as appropriate.

GEO-4 Additional geotechnical investigation shall be performed for the electric transmission line where it crosses areas of projected liquefaction hazards per the Seismic Hazard Reduction Act. This geotechnical investigation shall be prepared and provided to the city of Palmdale as per the General Plan Safety Element Policy S1.1.1.

Verification: The design-level geotechnical investigation report for the proposed transmission line shall be submitted to the CPM at least 60 days prior to start of transmission line construction.

GEO-5 Additional geologic or geotechnical investigation shall be performed along the southern alignment between the San Andreas Fault and the Vincent substation, to evaluate and mitigate the risk of landslide failure affecting the transmission line towers.

Verification: The design-level engineering geological or geotechnical investigation report for the proposed transmission line shall be submitted to the CPM at least 60 days prior to start of transmission line construction.

PAL-1 The project owner shall provide the Compliance Project Manager (CPM) with the resume and qualifications of its Paleontological Resource Specialist (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 for review and approval.

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 Qualified Professional Paleontologist as defined in the Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources by the Society of Vertebrate Paleontology (SVP) (SVP, 2010). 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 three 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 PRMs to monitor as he or she deems necessary on the project (PRMs) shall have the equivalent or combination of the following qualifications approved by the CPM:

- BS or BA degree in geology or paleontology and one year of experience monitoring in California; or
- AS or AA in geology, paleontology, or biology and four years' experience monitoring in California; or
- Enrollment in upper division classes pursuing a degree in the fields of geology or paleontology and two years of monitoring experience in California.

Verification: (1) At least 60 days prior to the start of ground disturbance, the project owner shall submit a resume and statement of availability of its designated PRS for on-site work to the CPM, whose approval must be obtained prior to initiation of ground disturbing activities.

(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**.** The letter shall state that the identified monitors meet the minimum qualifications for paleontological resource monitoring required by this condition of certification. 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 range. If the footprint of the project or its linear facilities change, 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 a Paleontological Resources Monitoring and Mitigation Plan (PRMMP), and submits the PRMMP to the CPM for review and approval. Approval of the PRMMP by the CPM shall occur prior to any ground disturbance. The PRMMP shall be used as the basis of discussion when on-site decisions or changes are proposed. Copies of the PRMMP shall include all updates and reside with the PRS, each monitor, the project owner's on-site manager, and the CPM.

The PRMMP shall be developed in accordance with the guidelines of the Society of Vertebrate Paleontology (SVP 2010 and shall include, but not be limited, to the following:

1. Procedures for and 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 sampling is needed, a description of the sampling methodology and how much sampling is expected to take place in which geologic 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, stopping 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. Approval of the-PRMMP by the CPM shall occur prior to any ground disturbance. 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, the project owner and the PRS shall prepare a CPM-approved Worker Environmental Awareness Program (WEAP).

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 purpose of the WEAP is to train project workers to recognize paleontologic resources and identify procedures they must follow to ensure there are no impacts to sensitive paleontologic resources. The WEAP shall include:

1. A discussion of applicable laws and penalties under the law;

2. Good quality photographs or physical examples of vertebrate fossils for project sites containing units of high paleontologic sensitivity;

3. Information that the PRS or PRM has the authority to stop or redirect construction in the event of a discovery or unanticipated impact to a paleontological resource;

4. Instruction that employees are to stop 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.

The project owner shall also submit the training script and, if the project owner is planning to use a video for training, a copy of the training video, with the set of reporting procedures for workers to follow that will be used to present the WEAP and qualify workers to conduct ground disturbing activities that could impact paleontologic resources.

Verification:

(1) At least 30 days prior to ground disturbance, the project owner shall submit to the CPM for review and comment the draft WEAP, including the brochure and sticker. The submittal shall also include a draft training script and, if the project owner is planning to use a video for training, a copy of the training video, with the set of reporting procedures for workers to follow.

(2) At least 15 days prior to ground disturbance, the project owner shall submit to the CPM for approval the final WEAP and training script

PAL-5 No worker shall excavate or perform any ground disturbance activity prior to receiving CPM-approved WEAP training by the PRS, unless specifically approved by the CPM.

Prior to project kick-off and ground disturbance the following workers shall be WEAP trained by the PRS in-person: project managers, construction

supervisors, foremen, and all general workers involved with or who operate ground-disturbing equipment or tools. Following project kick-off, 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. A WEAP certification of completion form shall be used to document who has received the required training.

Verification:

(1) 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 and/or video) offered that month. An example of a suitable WEAP certification completion form is provided below. The MCR shall also include a running total of all persons who have completed the training to date.

(2) If the project owner requests an alternate paleontological WEAP 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 WEAP training prior to CPM authorization.

PAL-6 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 stop 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 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, when construction has been stopped because of a paleontological find.

The project owner shall ensure that the PRS prepares a summary of monitoring and other paleontological activities that will be included in each MCR. 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 paleontologic monitoring, including any incidents of non-compliance or any changes to the monitoring plan that have been approved by the CPM. If no monitoring took place during the month, the report shall include an explanation in the summary as to why monitoring was not conducted.

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 ten days in advance of any proposed changes in monitoring different from that 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-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; and the PRS' description of the sensitivity and significance of those resources.

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.

PAL-8 The project owner, through the designated PRS, shall ensure that all components of the PRMMP are adequately performed, including collection of fossil material, preparation of fossil material for analysis, analysis of fossils, identification and inventory of fossils, preparation of fossils for curation, and delivery for curation of all significant paleontological resource materials

encountered and collected during project construction. The project owner shall pay all curation fees charged by the museum for fossil material collected and curated as a result of paleontological mitigation. The project owner shall also provide the curator with documentation showing the project owner irrevocably and unconditionally donates, gives, and assigns permanent, absolute, and unconditional ownership of the fossil material.

Within 60 days after the submittal of the PRR, the project owner shall submit documentation to the CPM showing fees have been paid for curation and the owner relinquishes control and ownership of all fossil material.

Certification of Completion
Worker Environmental Awareness Program
Palmdale Energy Project (08-AFC-9C)

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

No.	Employee Name	Title/Company	Signature
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Cultural Trainer: _____ Signature:_____ Date: ___/___/____

PaleoTrainer: _____ Signature:_____ Date: ___/___/____

Biological Trainer: _____Signature:_____ Date:___/___/_____

TRANSMISSION SYSTEMS ENGINEERS CONDITIONS OF CERTIFICATION

TSE-1 The project owner shall furnish to the CPM and to the 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: Prior to the start of construction, 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 **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.

Table 1: Major Equipment List
Breakers
Step-up transformer
Switchyard
Busses
Surge arrestors
Disconnects
Take-off facilities
Electrical control building
Switchyard control building
Transmission pole/tower
Grounding system

TSE-2 Before the start of construction, the project owner shall assign to the project an electrical engineer and at least one of each of the following:

a) a civil engineer;

b) a geotechnical engineer or a civil engineer experienced and knowledgeable in the practice of soils engineering;

c) a design engineer who is either a structural engineer or a civil engineer and fully competent and proficient in the design of power plant structures and equipment supports; or

d) a mechanical engineer (Business and Professions Code Sections 6704 et seq. require state registration to practice as either a civil engineer or a structural engineer in California).

The tasks performed by the civil, mechanical, electrical, or design engineers may be divided between two or more engineers as long as each engineer is responsible for a particular segment of the project, e.g., proposed earthwork,

civil structures, power plant structures, or equipment support. No segment of the project shall have more than one responsible engineer. The transmission line may be the responsibility of a separate California registered electrical engineer. The civil, geotechnical, or civil and design engineer, assigned as required by Facility Design Condition 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 earth work and require changes; if site conditions are unsafe or do not conform with the predicted conditions used as the basis for design of earth work or foundations.

The electrical engineer shall:

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: Prior to the start of rough grading, the project owner shall submit to the CBO for review and approval, the names, qualifications, and registration numbers of all the responsible engineers assigned to the project. The project owner shall notify the CPM of the CBO's approvals of the engineers within five days of the approval.

If the designated responsible engineer is subsequently reassigned or replaced, the project owner has five days in which to submit the name, qualifications, and registration number of the newly assigned engineer to the CBO for review and approval. The project owner shall notify the CPM of the CBO's approval of the new engineer within five days of the approval.

TSE-3 If any discrepancy in design and/or construction is discovered in any engineering work that has undergone CBO design review and approval, the project owner shall document the discrepancy and recommend corrective action (2001 California Building Code, Chapter 1, 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 refer to 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 five days,

the reason for the disapproval, along with the revised corrective action required to obtain the CBO's approval.

TSE-4 For the power plant switchyard, outlet line and termination, the project owner shall not begin any construction until plans for that increment of construction have been approved by the CBO. These plans, together with design changes and design change notices, shall remain on the site for one year after completion of construction. The project owner shall request that the CBO inspect the installation to ensure compliance with the requirements of applicable LORS. The following activities shall be reported in the monthly compliance report:

a) receipt or delay of major electrical equipment;

b) testing or energization of major electrical equipment; and

c) the number of electrical drawings approved, submitted for approval, and still to be submitted.

Verification: Prior to the start of each increment of construction, the project owner shall submit to the CBO for review and approval the final design plans, specifications and calculations for equipment and systems of the power plant switchyard, and outlet line and termination, including a copy of the signed and stamped statement from the responsible electrical engineer verifying compliance with all applicable LORS, and send the CPM 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 will conform to all applicable LORS, and the requirements listed below. The project owner shall submit the required number of copies of the design drawings and calculations, as determined by the CBO. Once approved, the project owner shall inform the CPM and CBO of any anticipated changes to the design, and shall submit a detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change to the CPM and CBO for review and approval.

The power plant outlet line shall meet or exceed the electrical, mechanical, civil, and structural requirements of CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the High Voltage Electric Safety Orders, California ISO standards, National Electric Code (NEC) and related industry standards.

a) Breakers and busses in the power plant switchyard and other switchyards, where applicable, shall be sized to comply with a short-circuit analysis.

b) Outlet line crossings and line parallels with transmission and distribution facilities shall be coordinated with the transmission line owner and comply with the owner's standards.

c) The project conductors shall be sized to accommodate the full output of the project.

d) Termination facilities shall comply with applicable PG&E interconnection standards.

e) The project owner shall provide to the CPM:

i) The Special Protection System (SPS) sequencing and timing if applicable,

ii) A letter stating that the mitigation measures or projects selected by the transmission owners for each reliability criteria violation, for which the project is responsible, are acceptable,

iii) The final SCE Right-of-Way Study, and

iv) A copy of the Federal Energy Regulatory Commission executed LGIA signed by the California ISO, SCE and the project owner.

v) A letter from the DWR indicating that DWR has been consulted with has coordinated the planned outages associated with the replacement and reconductoring of the Pearblossom-Vincent 230 kV line to have no adverse impact to DWR's operations, and determined the outages to be acceptable.

Verification: Prior to the start of construction or start of modification of transmission facilities, the project owner shall submit to the CBO for approval:

a) Design drawings, specifications, and calculations conforming with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, CA ISO standards, National Electric Code (NEC) and related industry standards, for the poles/towers, foundations, anchor bolts, conductors, grounding systems, and major switchyard equipment;

b) For each element of the transmission facilities identified above, the submittal package to the CBO shall contain the design criteria, a discussion of the calculation method(s), a sample calculation based on "worst case conditions"[8] and a statement signed and sealed by the registered engineer in responsible charge, or other acceptable alternative verification, that the transmission element(s) will conform with CPUC General Order 95 or National Electric Safety Code (NESC); Title 8 of the California Code and Regulations (Title 8); Articles 35, 36 and 37 of the *High Voltage Electric Safety Orders*, California ISO standards, National Electric Code (NEC), and related industry standards;

[1] Worst-case condition's for the foundations would include for instance, a dead-end or angle pole.

c) Electrical one-line diagrams signed and sealed by the registered professional electrical engineer in charge, a route map, and an engineering description of the equipment and configurations covered by requirements **TSE-5** a) through e);

d) The Special Protection System (SPS) sequencing and timing if applicable shall be provided concurrently to the CPM.

e) A letter stating that the mitigation measures or projects selected by the transmission owners for each reliability criteria violation, for which the project is responsible, are acceptable,

f) The final SCE Right-of-Way Study, and

g) A copy of the Federal Energy Regulatory Commission executed LGIA signed by the California ISO, SCE and the project owner.

h) A signed letter from the CDWR indicating that the planned outages associated with the replacement and reconductoring of the Pearblossom to Vincent 230 kV line are acceptable.

Prior to the start of construction of or modification of transmission facilities, the project owner shall inform the CBO and the CPM of any anticipated changes to the design that are different from the design previously submitted and approved and shall submit a detailed description of the proposed change and complete engineering, environmental, and economic rationale for the change to the CPM and CBO for review and approval.

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. The project owner shall contact the California ISO Outage Coordination Department, Monday through Friday, between the hours of 0700 and 1530 at (916) 351-2300 at least one business day prior to synchronizing the facility with the grid for testing. A report of conversation with the California ISO shall be provided electronically to the CPM one day before synchronizing the facility with the California transmission system for the first time.

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:

a) “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”, and applicable interconnection standards, NEC, related industry standards.

b) An “as built” engineering description of the mechanical, structural, and civil portion of the transmission facilities signed and sealed by the registered engineer in responsible charge or acceptable alternative verification. “As built” drawings of the electrical, mechanical, structural, and civil portion of the transmission facilities shall be maintained at the power plant and made available, if requested, for CPM audit as set forth in the “Compliance Monitoring Plan”.

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